UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

IN RE SONUS NETWORKS, INC. LITIGATION	Civil Action No. 04-10294-DPW

TRANSMITTAL AFFIDAVIT OF DANIEL H. GOLD IN SUPPORT OF DEFENDANT SONUS' MOTION TO DISMISS THE AMENDED CONSOLIDATED CLASS ACTION COMPLAINT

I, Daniel H. Gold, depose and state the following:

1. I am an associate with the law firm of Wilmer Cutler Pickering Hale and Dorr LLP, 60 State Street, Boston, Massachusetts. I am a member in good standing of the Bar of the Commonwealth of Massachusetts. I am counsel for defendant Sonus Networks, Inc. in the above-captioned matter.

2. I submit this affidavit on behalf of all the defendants and in support of Defendant Sonus' Motion To Dismiss The Amended Consolidated Class Action Complaint in the above-captioned matter.

3. I have attached true and accurate copies of the following documents hereto:

   a) Attached hereto as Exhibit A, Statement of Position 97-2;

   b) Attached hereto as Exhibit B, Form 14A filed with the SEC on March 28, 2002;

   c) Attached hereto as Exhibit C, Form 10K/A filed with the SEC on July 28, 2004 (without exhibits);

   d) Attached hereto as Exhibit D, Prospectus Supplement Filed with the SEC on September 24, 2003.

Subscribed and sworn to under the pains and penalties of perjury this 28th day of January 2005.

Daniel H. Gold

Daniel H. Gold, Esq.

Exhibit A

ACC Section 10,700

Statement of Position 97-2 Software Revenue Recognition

October 27, 1997

NOTE

Statements of Position (SOPs) on accounting issues present the conclusions of at least two-thirds of the Accounting Standards Executive Committee, which is the senior technical body of the Institute authorized to speak for the Institute in the areas of financial accounting and reporting. *Statement on Auditing Standards No. 69, The Meaning of* Present Fairly in Conformity With Generally Accepted Accounting Principles, identifies AICPA SOPs that have been cleared by the Financial Accounting Standards Board as sources of established accounting principles in category *b* of the hierarchy of generally accepted accounting principles that it establishes. AICPA members should consider the accounting principles in this SOP if a different accounting treatment of a transaction or event is not specified by a pronouncement covered by *Rule 203* of the AICPA Code of Professional Conduct. In such circumstances, the accounting treatment specified by the SOP should be used, or the member should be prepared to justify a conclusion that another treatment better presents the substance of the transaction in the circumstances.

An effective date provision of this SOP has been deferred by *SOP 98-4*, *Deferral of the Effective Date of a Provision of SOP 97-2*, Software Revenue Recognition. This SOP is effective March 31, 1998. If an enterprise had applied *SOP 97-2* in an earlier period for financial statements or information already issued prior to the promulgation of this SOP, amounts reported in those financial statements or as part of that information may be restated to reflect the deferral of the effective date of the second sentence of *paragraphs 10*, *37*, *41*, and *57* of SOP 97-2 and the related examples noted in *paragraph .03* of this SOP.

SOP 97-2 is amended by *SOP 98-9*, *Modification of SOP 97-2,* Software Revenue Recognition, With Respect to Certain Transactions. The provisions of this SOP that extend the deferral of the application of certain passages of *SOP 97-2* are effective December 15, 1998. All other provisions of this SOP are effective for transactions entered into in fiscal years beginning after March 15, 1999. Earlier adoption is permitted as of the beginning of fiscal years or interior periods for which financial statements or information has not been issued. Retroactive application of the provisions of this SOP is prohibited.

Introduction

.01 Statement of Position (SOP) 91-1, *Software Revenue Recognition*, was issued in 1991 to provide guidance on applying generally accepted accounting principles to software transactions and to narrow the range of revenue recognition practices that were in use before its issuance. Since the issuance of SOP 91-1, practice issues have been identified that the AICPA's Accounting Standards Executive Committee (AcSEC) believes are not addressed adequately in

SOP 91-1. In addition, AcSEC believes some of the guidance in SOP 91-1 should be reconsidered. This SOP supersedes SOP 91-1.

Scope

.02 This SOP provides guidance on when revenue should be recognized and in what amounts for **licensing**, selling, leasing, or otherwise marketing computer software. [fn 1] It should be applied to those activities by all entities that earn such revenue. It does not apply, however, to revenue earned on products or services containing software that is incidental [fn 2] to the products or services as a whole.

.03 In connection with the licensing of an existing product, a vendor might offer a small discount (for example, a coupon or other form of offer for five percent off) on additional licenses of the licensed product or other products that exist at the time of the offer but are not part of the arrangement. Such marketing and promotional activities are not unique to software and are not included in the scope of this SOP. [fn 3]

Relationship to Other Pronouncements

.04 If a lease of software includes property, plant, or equipment, the revenue attributable to the property, plant, or equipment should be accounted for in accordance with Financial Accounting Standards Board (FASB) Statement of Financial Accounting Standards No. 13, *Accounting for Leases*, and any revenue attributable to the software, including **postcontract customer support (PCS)**, should be accounted for separately in conformity with the guidance set forth in this SOP. However, in conformity with paragraph .02, if the property, plant, or equipment contains software that is incidental to the property, plant, or equipment as a whole, the software should not be accounted for separately.

.05 A number of the requirements of this SOP are similar to or overlap those in certain pronouncements of the Accounting Principles Board (APB) or the FASB, such as FASB Statement No. 48, *Revenue Recognition When Right of Return Exists*. This SOP does not alter the requirements of any APB Opinion or FASB pronouncement.

Conclusions

.06 The following conclusions should be read in conjunction with the *Basis for Conclusions* section, beginning with paragraph .93 of this SOP, and the examples in appendix A, *Examples of the Application of Certain Provisions of this SOP* [paragraph .146].

Basic Principles

.07 Software arrangements range from those that provide a license for a single software product to those that, in addition to the **delivery** of software or a software system, require significant production, modification, or customization of software. If an arrangement to deliver software or a software system, either alone or together with other products or services, requires significant production, modification, or customization of software, the entire arrangement should be accounted for in conformity with Accounting Research Bulletin (ARB) No. 45, *Long-Term Construction-Type Contracts*, using the relevant guidance herein, and in SOP 81-1, *Accounting for Performance of Construction-Type and Certain Production-Type Contracts* [section 10,330]. [fn 4]

.08 If the arrangement does not require significant production, modification, or customization of software, revenue should be recognized when all of the following criteria are met.

- Persuasive evidence of an arrangement exists.
- Delivery has occurred.
- The vendor's fee is fixed or determinable.
- Collectibility is probable. [fn 5]

.09 Software arrangements may provide licenses for multiple software deliverables (for example, software products, **upgrades/enhancements**, PCS, or services), which are termed multiple *elements*. A number of the elements may be described in the arrangement as being deliverable only on a **when-and-if-available** basis. When-and-if-available deliverables should be considered in determining whether an arrangement includes multiple elements. Accordingly, the requirements of this SOP with respect to arrangements that consist of multiple elements should be applied to all additional products and services specified in the arrangement, including those described as being deliverable only on a when-and-if-available basis.

.10 If an arrangement includes multiple elements, the fee should be allocated to the various elements based on vendor-specific objective evidence of fair value, regardless of any separate prices stated within the contract for each element. Vendor-specific objective evidence of fair value is limited to the following:

- The price charged when the same element is sold separately
- For an element not yet being sold separately, the price established by management having the relevant authority; it must be probable that the price, once established, will not change before the separate introduction of the element into the marketplace

The amount allocated to undelivered elements is not subject to later adjustment. [fn 6] However, if it becomes probable that the amount allocated to an undelivered element will result in a loss on that element of the arrangement, the loss should be recognized pursuant to FASB Statement No. 5, *Accounting for Contingencies*. When a vendor's pricing is based on multiple factors such as the number of products and the number of users, the amount allocated to the same element when sold separately must consider all the factors of the vendor's pricing structure.

.11 If a discount is offered in a multiple-element arrangement, a proportionate amount of that discount should be applied to each element included in the arrangement based on each element's fair value without regard to the discount. However, as discussed in paragraph .37, no portion of the discount should be allocated to any upgrade rights. Moreover, to the extent that a discount exists, the residual method described in paragraph .12 attributes that discount entirely to the delivered elements. [As amended, effective for transactions entered into in fiscal years beginning after March 15, 1999, by Statement of Position 98-9.]

.12 If sufficient vendor-specific objective evidence does not exist for the allocation of revenue to the various elements of the arrangement, all revenue from the arrangement should be deferred until the earlier of the point at which (*a*) such sufficient vendor-specific objective evidence does exist or (*b*) all elements of the arrangement have been delivered. The following exceptions to this guidance are provided.

- If the only undelivered element is PCS, the entire fee should be recognized ratably (see paragraphs .56 through .62).

- If the only undelivered element is services that do not involve significant production, modification, or customization of software (for example, training or installation), the entire fee should be recognized over the period during which the services are expected to be performed (see paragraphs .63 through .71).

- If the arrangement is in substance a subscription, the entire fee should be recognized ratably (see paragraphs .48 and .49).

- If the fee is based on the number of copies, the arrangement should be accounted for in conformity with paragraphs .43 through .47.

- There may be instances in which there is vendor-specific objective evidence of the fair values of *all* undelivered elements in an arrangement but vendor-specific objective evidence of fair value does not exist for one or more of the delivered elements in the arrangement. In such instances, the fee should be recognized using the residual method, provided that (*a*) all other applicable revenue recognition criteria in this SOP are met and (*b*) the fair value of all of the undelivered elements is less than the arrangement fee. Under the residual method, the arrangement fee is recognized as follows: (*a*) the total fair value of the undelivered elements, as indicated by vendor-specific objective evidence, is deferred and *(b)* the difference between the total arrangement fee and the amount deferred for the undelivered elements is recognized as revenue related to the delivered elements.

[As amended, effective for transactions entered into in fiscal years beginning after March 15, 1999, by Statement of Position 98-9.]

.13 The portion of the fee allocated to an element should be recognized as revenue when the criteria in paragraph .08 of this SOP are met with respect to the element. In applying those criteria, the delivery of an element is considered not to have occurred if there are undelivered elements that are essential to the functionality of the delivered element, because the **customer** would not have the full use of the delivered element.

.14 No portion of the fee (including amounts otherwise allocated to delivered elements) meets the criterion of collectibility if the portion of the fee allocable to delivered elements is subject to forfeiture, refund, or other concession if any of the undelivered elements are not delivered. In order for the revenue related to an arrangement to be considered not subject to forfeiture, refund, or other concession, management must intend not to provide refunds or concessions that are not required under the provisions of the arrangement. All available evidence should be considered to determine whether the evidence persuasively indicates that the revenue is not subject to forfeiture, refund, or other concession. Although no single item of evidence may be persuasive, the following additional items should be considered:

- Acknowledgment in the arrangement of products not currently available or not to be delivered currently

- Separate prices stipulated in the arrangement for each deliverable element

- Default and damage provisions as defined in the arrangement

- Enforceable payment obligations and due dates for the delivered elements that are not dependent on the delivery of the future deliverable elements, coupled with the intent of

the vendor to enforce rights of payment

- Installation and use of the delivered software
- Support services, such as telephone support, related to the delivered software being provided currently by the vendor

Regardless of the preceding, the vendor's historical pattern of making refunds or other concessions that were not required under the original provisions (contractual or other) of other arrangements should be considered more persuasive than terms included in the arrangement that indicate that no concessions are required.

Evidence of an Arrangement

.15 Practice varies with respect to the use of written contracts. Although a number of sectors of the industry rely upon signed contracts to document arrangements, other sectors of the industry that license software (notably the packaged software sector) do not.

.16 If the vendor operates in a manner that does not rely on signed contracts to document the elements and obligations of an arrangement, the vendor should have other forms of evidence to document the transaction (for example, a purchase order from a third party or on-line authorization). If the vendor has a customary business practice of utilizing written contracts, evidence of the arrangement is provided only by a contract signed by both parties.

.17 Even if all other requirements set forth in this SOP for the recognition of revenue are met (including delivery), revenue should not be recognized on any element of the arrangement unless persuasive evidence of an arrangement exists.

Delivery

.18 The second criterion in paragraph .08 for revenue recognition is delivery. The principle of not recognizing revenue before delivery applies whether the customer is a **user** or a **reseller**. Except for arrangements in which the fee is a function of the number of copies, delivery is considered to have occurred upon the transfer of the product master or, if the product master is not to be delivered, upon the transfer of the first copy. For software that is delivered electronically, the delivery criterion of paragraph .08 is considered to have been met when the customer either (*a*) takes possession of the software via a download (that is, when the customer takes possession of the electronic data on its hardware), or (*b*) has been provided with access codes that allow the customer to take immediate possession of the software on its hardware pursuant to an agreement or purchase order for the software. In such cases, revenue should be recognized if the other criteria of paragraph .08 have been satisfied.

.19 Paragraphs .20 through .25 provide guidance on determining whether delivery is considered to have occurred in certain kinds of software transactions.

Customer Acceptance

.20 After delivery, if uncertainty exists about customer acceptance of the software, license revenue should not be recognized until acceptance occurs.

Determining Delivery-Multiple Copies of Software Products Versus Multiple Licenses

.21 Arrangements to use multiple copies of a software product under **site licenses** with users

and to market multiple copies of a software product under similar arrangements with resellers should be distinguished from arrangements to use or market multiple single licenses of the same software.

- In the former kind of arrangement, duplication is incidental to the arrangement and the delivery criterion is met upon the delivery of the first copy or product master. The vendor may be obligated to furnish up to a specified number of copies of the software, but only if the copies are requested by the user. The licensing fee is payable even if no additional copies are requested by the user or reseller. If the other criteria in this SOP for revenue recognition are met, revenue should be recognized upon delivery of the first copy or product master. The estimated costs of duplication should be accrued at that time.

- In the latter kind of arrangement, the licensing fee is a function of the number of copies delivered to, made by, or deployed by the user or reseller. Delivery occurs and revenue should be recognized as the copies are made by the user or sold by the reseller if the other criteria in this SOP for revenue recognition are met.

Delivery Other Than to the Customer

.22 Delivery should not be considered complete unless the destination to which the software is shipped is the customer's place of business or another site specified by the customer. In addition, if a customer specifies an intermediate site but a substantial portion of the fee is not payable until the delivery by the vendor to another site specified by the customer, revenue should not be recognized until the delivery is made to that other site.

Delivery Agents

.23 Vendors may engage agents, often referred to as fulfillment houses, to either duplicate and deliver or only deliver software products to customers. Revenue from transactions involving delivery agents should be recognized when the software is delivered to the customer. Transferring the fulfillment obligation to an agent of the vendor does not relieve the vendor of the responsibility for delivery. This is the case even if the vendor has no direct involvement in the actual delivery of the software product to the customer.

Authorization Codes

.24 In a number of software arrangements, vendors use **authorization codes**, commonly referred to as *keys*, to permit customer access to software that otherwise would be restricted. Keys are used in a variety of ways and may serve different purposes. For example, permanent keys may be used to control access to the software, or additional permanent keys may be necessary for the duplication of the software. Temporary keys may be used for the same purposes and also may be used to enhance the vendor's ability to collect payment or to control the use of software for demonstration purposes.

.25 In software arrangements involving the use of keys, delivery of a key is not necessarily required to satisfy the vendor's delivery responsibility. The software vendor should recognize revenue on delivery of the software if all other requirements for revenue recognition under this SOP and all of the following conditions are met.

- The customer has licensed the software and the vendor has delivered a version of the software that is fully functional except for the permanent key or the additional keys (if additional keys are used to control the reproduction of the software).

- The customer's obligation to pay for the software and the terms of payment, including the timing of payment, are not contingent on delivery of the permanent key or additional keys (if additional keys are used to control the reproduction of the software).

- The vendor will enforce and does not have a history of failing to enforce its right to collect payment under the terms of the original arrangement.

In addition, if a temporary key is used to enhance the vendor's ability to collect payment, the delivery of additional keys, whether temporary or permanent, is not required to satisfy the vendor's delivery responsibility if (*a*) the above conditions are met and (*b*) the use of a temporary key in such circumstances is a customary practice of the vendor. Selective issuance of temporary keys might indicate that collectibility is not probable or that the software is being used only for demonstration purposes.

Fixed or Determinable Fees and Collectibility

.26 The other prerequisites in paragraph .08 for revenue recognition are that (*a*) the vendor's fee is fixed or determinable and (*b*) collectibility is probable. A software licensing fee is not fixed or determinable if the amount is based on the number of units distributed or copied, or the expected number of users of the product. Revenue recognition for variable-pricing arrangements is discussed in paragraphs .43 through .47 of this SOP. Additionally, if an arrangement includes (*a*) rights of return or (*b*) rights to refunds without return of the software, FASB Statement No. 48 requires that conditions that must be met in order for the vendor to recognize revenue include that the amount of future returns or refunds can be reasonably estimated.

Factors That Affect the Determination of Whether a Fee is Fixed or Determinable and Collectible

.27 A number of arrangements that call for fixed or determinable payments, including minimum royalties or license fees from resellers, specify a payment period that is short in relation to the period during which the customer is expected to use or market the related products. Other arrangements have payment terms that extend over a substantial portion of the period during which the customer is expected to use or market the related products. Because a product's continuing value may be reduced due to the subsequent introduction of enhanced products by the vendor or its competitors, the possibility that the vendor still may provide a refund or concession to a creditworthy customer to liquidate outstanding amounts due under the original terms of the arrangement increases as payment terms become longer.

.28 For the reason cited in paragraph .27 *any* extended payment terms in a software licensing arrangement may indicate that the fee is not fixed or determinable. Further, if payment of a significant portion of the software licensing fee is not due until after expiration of the license or more than twelve months after delivery, the licensing fee should be *presumed* not to be fixed or determinable. However, this presumption may be overcome by evidence that the vendor has a standard business practice of using long-term or installment contracts and a history of successfully collecting under the original payment terms without making concessions. In such a situation, a vendor should consider such fees fixed or determinable and should recognize revenue upon delivery of the software, provided all other conditions for revenue recognition in this SOP have been satisfied.

.29 If it cannot be concluded that a fee is fixed or determinable at the outset of an arrangement, revenue should be recognized as payments from customers become due (assuming all other conditions for revenue recognition in this SOP have been satisfied).

.30 For reseller arrangements, the following factors also should be considered in evaluating

whether the fixed or determinable fee and collectibility criteria for revenue recognition are met.

- Business practices, the reseller's operating history, competitive pressures, informal communications, or other factors indicate that payment is substantially contingent on the reseller's success in distributing individual units of the product. fn 7

- Resellers are new, undercapitalized, or in financial difficulty and may not demonstrate an ability to honor a commitment to make fixed or determinable payments until they collect cash from their customers.

- Uncertainties about the potential number of copies to be sold by the reseller may indicate that the amount of future returns cannot be reasonably estimated on delivery; examples of such factors include the newness of the product or marketing channel, competitive products, or dependence on the market potential of another product offered (or anticipated to be offered) by the reseller.

- Distribution arrangements with resellers require the vendor to rebate or credit a portion of the original fee if the vendor subsequently reduces its price for a product and the reseller still has rights with respect to that product (sometimes referred to as price protection). If a vendor is unable to reasonably estimate future price changes in light of competitive conditions, or if significant uncertainties exist about the vendor's ability to maintain its price, the arrangement fee is not fixed or determinable. In such circumstances, revenue from the arrangement should be deferred until the vendor is able to reasonably estimate the effects of future price changes and the other conditions of this SOP have been satisfied.

.31*Customer Cancellation Privileges.* Fees from licenses cancelable by customers are neither fixed nor determinable until the cancellation privileges lapse. Fees from licenses with cancellation privileges expiring ratably over the license period are considered to become determinable ratably over the license period as the cancellation privileges lapse. In applying the provisions of this paragraph, obligations related to warranties for defective software, including warranties that are routine, short-term, and relatively minor, should be accounted for in conformity with FASB Statement No. 5. Additionally, short-term rights of return, such as thirty-day money-back guarantees, should not be considered cancellation privileges; the related returns should be accounted for in conformity with FASB Statement No. 48.

.32*Fiscal Funding Clauses.* Fiscal funding clauses sometimes are found in software license arrangements in which the licensees are governmental units. Such clauses generally provide that the license is cancelable if the legislature or funding authority does not appropriate the funds necessary for the governmental unit to fulfill its obligations under the licensing arrangement.

.33 Consistent with FASB Technical Bulletin No. 79-10, *Fiscal Funding Clauses in Lease Agreements*, a software licensing arrangement with a governmental unit containing a fiscal funding clause should be evaluated to determine whether the uncertainty of a possible license arrangement cancellation is a remote contingency. fn 8 If the likelihood is assessed as remote, the software licensing arrangement should be considered noncancelable. Such an assessment should include the factors discussed in paragraphs .27 and .28 of this SOP. If the likelihood is assessed as other than remote, the license should be considered cancelable, thus precluding revenue recognition. A fiscal funding clause with a customer other than a governmental unit that is required to include such a clause creates a contingency that precludes revenue recognition until the requirements of the clause and all other provisions of this SOP have been satisfied.

Multiple-Element Arrangements

.34 As discussed in paragraph .09, multiple-element arrangements to which contract accounting does not apply may include customer rights to any combination of additional software deliverables, services, or PCS. If contract accounting does not apply, individual elements in such arrangements should be accounted for in accordance with paragraphs .08 through .14. Paragraphs .35 through .73 provide guidance on the application of those paragraphs to multiple-element arrangements.

Additional Software Deliverables and Rights to Exchange or Return Software

.35 As part of a multiple-element arrangement, a vendor may agree to deliver software currently and to deliver additional software in the future. The additional deliverables may include upgrades/enhancements or additional software products. Additionally, a vendor may provide the customer with the right to exchange or return software, including the right to transfer software from one hardware **platform** or operating system to one or more other platforms or operating systems (a **platform-transfer right**).

.36*Upgrades/enhancements*. As part of a multiple-element arrangement, a vendor may agree to deliver software currently and provide the customer with an **upgrade right** for a specified upgrade/enhancement. The upgrade right may be evidenced by a specific agreement, commitment, or the vendor's established practice. (Rights to receive *unspecified* upgrades/enhancements on a when-and-if-available basis are PCS, as it has been redefined in this SOP.) The upgrade right should be accounted for as a separate element in accordance with paragraphs .08 through .14. Guidance on the application of those paragraphs to multiple-element software arrangements that include upgrade rights is given in paragraphs .37 and .38.

.37 If a multiple-element arrangement includes an upgrade right, the fee should be allocated between the elements based on vendor-specific objective evidence of fair value. The fee allocated to the upgrade right is the price for the upgrade/enhancement that would be charged to existing users of the software product being updated. If the upgrade right is included in a multiple-element arrangement on which a discount has been offered (see paragraph .11), no portion of the discount should be allocated to the upgrade right. If sufficient vendor-specific evidence exists to reasonably estimate the percentage of customers that are not expected to exercise the upgrade right, the fee allocated to the upgrade right should be reduced to reflect that percentage. This estimated percentage should be reviewed periodically. The effect of any change in that percentage should be accounted for as a change in accounting estimate.

.38 The amount of the fee allocated to the upgrade right should be recognized as revenue when the conditions in paragraphs .08 through .14 are met. If sufficient vendor-specific objective evidence does not exist for the allocation of the fee to the upgrade right, revenue from the arrangement should be deferred until the earlier of the point at which (*a*) such sufficient vendor-specific objective evidence does exist or (*b*) all elements of the arrangement have been delivered.

.39*Additional Software Products*. As part of a multiple-element arrangement, a vendor may agree to deliver software currently and deliver specified additional software products in the future. The rights to these additional products may be included either in the terms of a PCS arrangement or in a separate agreement. Even if the rights to the additional software products are included in a PCS arrangement, the revenue allocable to the additional software products should be accounted for separately from the PCS arrangement as an element of a multiple-element arrangement.

.40 Multiple-element arrangements that include rights to undelivered additional software products that are not subscriptions (see paragraphs .48 and .49) should be accounted for in accordance with paragraphs .08 through .14 of this SOP. Guidance on the application of those paragraphs to such arrangements is provided in paragraphs .41 through .47 below.

.41 The fee from the arrangement should be allocated among the products based on vendor-specific objective evidence of fair value. The allocation should be based on the relative sales prices (determined pursuant to paragraphs .10 and .11 of this SOP) of the products. If vendor-specific objective evidence of fair value does not exist, paragraph .12 of this SOP requires that all revenue from the arrangement be deferred until the earlier of the point at which (*a*) such sufficient vendor-specific objective evidence does exist or (*b*) all elements of the arrangement have been delivered. The fee allocated to the additional software products should not be reduced by the percentage of any customers that are not expected to exercise the right to receive additional software products.

.42 If the arrangement is based on a price per product (not a price per copy), the portion of the fee allocated to a product should be recognized as revenue when the product is delivered, assuming all other provisions of paragraphs .08 through .14 of this SOP are met.

.43 Some **fixed fee** license or reseller arrangements provide customers with the right to reproduce or obtain copies at a specified price per copy (rather than per product) of two or more software products up to the total amount of the fixed fee. A number of the products covered by the arrangement may not be deliverable or specified at the inception of the arrangement. Although the price per copy is fixed at the inception of the arrangement, an allocation of the arrangement fee to the individual products generally cannot be made, because the total revenue allocable to each software product is unknown and depends on the choices to be made by the customer and, sometimes, future development activity while the arrangement is in effect. Nevertheless, as discussed in paragraph .46 of this SOP, in certain situations, revenue can be allocated to the products that are undeliverable or not specified at the inception of the arrangement.

.44 In arrangements in which no allocation can be made, until the first copy or product master of each product covered by the arrangement has been delivered to the customer assuming the provisions of paragraphs .08 through .14 of this SOP are met, revenue should be recognized as copies of delivered products either (*a*) are reproduced by the customer or (*b*) are furnished to the customer if the vendor is duplicating the software. Once the vendor has delivered the product master or the first copy of all products covered by the arrangement, any licensing fees not previously recognized should be recognized. (At that point, only duplication of the software is required to satisfy the vendor's delivery requirement. As discussed in paragraph .21 of this SOP, duplication of the software is incidental to the arrangement, and delivery is deemed to have occurred upon delivery of the product master or first copy.) When the arrangement terminates, the vendor should recognize any licensing fees not previously recognized.

.45 The revenue from the kind of arrangements discussed in paragraph .44 should not be recognized fully until at least one of the following conditions is met.

- Delivery is complete for all products covered by the arrangement.
- The aggregate revenue attributable to all copies of the software products delivered is equal to the fixed fee, provided that the vendor is not obligated to deliver additional software products under the arrangement.

.46 Nevertheless, certain arrangements that include products that are not deliverable at the inception impose a maximum number of copies of the undeliverable product(s) to which the customer is entitled. In such arrangements, a portion of the arrangement fee should be allocated to the undeliverable product(s). This allocation should be made assuming that the customer will elect to receive the maximum number of copies of the undeliverable product(s).

.47 The revenue allocated to the delivered products should be recognized when the product

master or first copy is delivered. If, during the term of the arrangement, the customer reproduces or receives enough copies of these delivered products so that revenue allocable to the delivered products exceeds the revenue previously recognized, such additional revenue should be recognized as the copies are reproduced or delivered. The revenue allocated to the undeliverable product(s) should be reduced by a corresponding amount.

.48 As part of a multiple-element arrangement with a user, a vendor may agree to deliver software currently and to deliver *unspecified* additional software products in the future (including unspecified platform transfer rights that do not qualify for exchange accounting as described in paragraphs .50 through .55). For example, the vendor may agree to deliver all new products to be introduced in a family of products over the next two years. These arrangements are similar to arrangements that include PCS in that future deliverables are unspecified. Nevertheless, they are distinguished from arrangements that include PCS because the future deliverables are products, not unspecified upgrades/enhancements.

.49 The software elements of the kinds of arrangements discussed in paragraph .48 should be accounted for as subscriptions. No allocation of revenue should be made among any of the software products, and all software product-related revenue from the arrangement should be recognized ratably over the term of the arrangement beginning with delivery of the first product. If the term of the arrangement is not stated, the revenue should be recognized ratably over the estimated economic life of the products covered by the arrangement, beginning with delivery of the first product. An intent on the part of the vendor not to develop new products during the term of the arrangement does not relieve the vendor of the requirement to recognize revenue ratably over the term of the arrangement, beginning with the delivery of the first product.

.50*Rights to Exchange or Return Software*. As part of an arrangement, a software vendor may provide the customer with the right to return software or to exchange software for products with no more than minimal differences in price, functionality, or features. The accounting for returns is significantly different from the accounting for exchanges. Although it is sometimes difficult to determine whether a transaction is a return or exchange of software, the fact that the software is not returned physically does not preclude accounting for the transaction as either an exchange or as a return. If the software is not returned physically and the customer contractually is entitled to continue to use the previously delivered software, the arrangement should be accounted for in the manner prescribed in the section herein entitled "Additional Software Products" (see paragraphs .39 through .49). If the software is not returned physically and the customer contractually is not entitled to continue to use the previously delivered software, the transaction should be accounted for either as a return or as an exchange, as discussed in the following paragraphs.

.51 If the rights discussed in the previous paragraph are offered to users (but not resellers), the exchanges are analogous to "exchanges by ultimate customers of one item for another of the same kind, quality, and price . . . [that] are not considered returns" described in footnote 3 of FASB Statement No. 48. Conversely, exchanges by users of software products for dissimilar software products or for similar software products with more than minimal differences in price, functionality, or features are considered returns, and revenue related to arrangements that provide users with the rights to make such exchanges should be accounted for in conformity with FASB Statement No. 48. If the other product(s) is not available at the time the initial product is delivered, there should be persuasive evidence that demonstrates there will be no more than minimal differences in price, features, or functionality among the products in order for the right to qualify as a right to exchange. Additionally, if the vendor expects to incur a significant amount of development costs related to the other product, the other product should be considered to have more than a minimal difference in functionality.

.52 As part of a multiple-element arrangement, a vendor may grant a user a platform- transfer right. Depending on the circumstances, the exercise of a platform-transfer right may represent an exchange, a return, or additional software products for accounting purposes. If the customer

contractually is entitled to continue to use the software that was delivered originally (in addition to the software that is to be delivered for the new platform), the platform transfer right should be accounted for in the manner prescribed in the section herein entitled "Additional Software Products" (see paragraphs .39 through .49).

.53 If, as part of a multiple-element arrangement, a vendor offers a user (not a reseller) a platform-transfer right, and the provisions of paragraphs .08 through .14 of this SOP are met, the revenue from the software license should be recognized upon the initial delivery of the software, and the exercise of the platform-transfer right should be treated as an exchange, if the platform-transfer right -

- Is for the same product (see paragraph .54)
- Does not increase the number of copies or concurrent users of the software product available under the license arrangement.

.54 Products are considered to be the same product if there are no more than minimal differences among them in price, features, and functions, and if they are marketed as the same product, even though there may be differences arising from environmental variables such as operating systems, databases, user interfaces, and platform scales. Indicators of "marketed as the same product" include (*a*) the same product name (although version numbers may differ) and (*b*) a focus on the same features and functions.

.55 As part of their standard sales terms or as a matter of practice, vendors may grant resellers the rights to exchange unsold software for other software (including software that runs on a different hardware platform or operating system). Because the reseller is not the ultimate customer (see paragraph .51), such exchanges, including those referred to as stock balancing arrangements, should be accounted for as returns. Arrangements that grant rights to make such exchanges should be accounted for in conformity with FASB Statement No. 48, even if the vendors require the resellers to purchase additional software to exercise the exchange rights.

Postcontract Customer Support

.56 Software arrangements may include the right to PCS. PCS includes the right to receive PCS services or *unspecified* upgrades/enhancements, or both, offered to users or resellers. A vendor may develop historical patterns of regularly providing all customers or certain kinds of customers with the services or unspecified upgrades/enhancements normally associated with PCS, or may anticipate doing so, even though there is no written contractual obligation or the stipulated PCS term commences at some date after delivery. In those situations, an implied PCS arrangement exists that commences upon product delivery. For purposes of applying the guidance in this SOP, PCS includes a vendor's expected performance based on such patterns, even if performance is entirely at the vendor's discretion and not pursuant to a formal agreement.

.57 If a multiple-element software arrangement includes explicit or implicit rights to PCS, the total fees from the arrangement should be allocated among the elements based on vendor-specific objective evidence of fair value, in conformity with paragraph .10. The fair value of the PCS should be determined by reference to the price the customer will be required to pay when it is sold separately (that is, the renewal rate). The portion of the fee allocated to PCS should be recognized as revenue ratably over the term of the PCS arrangement, because the PCS services are assumed to be provided ratably. However, revenue should be recognized over the period of the PCS arrangement in proportion to the amounts expected to be charged to expense for the PCS services rendered during the period if-

- Sufficient vendor-specific historical evidence exists demonstrating that costs to provide

PCS are incurred on other than a straight-line basis. In making this determination, the vendor should take into consideration allocated portions of cost accounted for as research and development (R&D) costs and the amortization of costs related to the upgrade-enhancement capitalized in conformity with FASB Statement No. 86, *Accounting for the Costs of Computer Software to Be Sold, Leased, or Otherwise Marketed*. Such costs should be considered as part of the costs to provide PCS.

- The vendor believes that it is probable that the costs incurred in performing under the current arrangement will follow a similar pattern.

Because the timing, frequency, and significance of unspecified upgrades/enhancements can vary considerably, the point at which unspecified upgrades/enhancements are expected to be delivered should not be used to support income recognition on other than a straight-line basis.

.58 If sufficient vendor-specific objective evidence does not exist to allocate the fee to the separate elements and the only undelivered element is PCS, the entire arrangement fee should be recognized ratably over (*a*) the contractual PCS period (for those arrangements with explicit rights to PCS) or (*b*) the period during which PCS is expected to be provided (for those arrangements with implicit rights to PCS).

.59 PCS revenue may be recognized together with the initial licensing fee on delivery of the software if all of the following conditions are met.

a. The PCS fee is included with the initial licensing fee.

b. The PCS included with the initial license is for one year or less.

c. The estimated cost of providing PCS during the arrangement is insignificant.

d. Unspecified upgrades/enhancements offered during PCS arrangements historically have been and are expected to continue to be minimal and infrequent.

If PCS revenue is recognized upon the delivery of the software, the vendor must accrue all estimated costs of providing the services, including upgrades/enhancements. Upgrades/enhancements are not developed solely for distribution to PCS customers; revenues are expected to be earned from providing the enhancements to other customers as well. Therefore, costs should be allocated between PCS arrangements and other licenses.

.60 A determination that unspecified upgrades/enhancements offered during the PCS arrangement are expected to be minimal and infrequent should be evidenced by the patterns of minimal and infrequent unspecified upgrades/enhancements offered in previous PCS arrangements. A conclusion that unspecified upgrades/enhancements are expected to be minimal and infrequent should not be reached simply because unspecified upgrades/enhancements have been or are expected to be offered less frequently than on an annual basis. Regardless of the vendor's history of offering unspecified upgrades/enhancements to initial licensees, PCS should be accounted for separately from the initial licensing fee if the vendor expects to offer upgrades/enhancements that are greater than minimal or more than infrequent to the users or resellers of the licensed software during the PCS arrangement.

.61 *Postdelivery Telephone Support at No Additional Charge.* Postdelivery telephone support provided to users by the vendor at no additional charge should be accounted for as PCS, in conformity with this SOP, regardless of whether the support is provided explicitly under the licensing arrangement. Although such telephone support may be offered or available for periods exceeding one year, if the vendor has established a history of providing substantially all the

telephone support within one year of the licensing or sale of the software, the PCS may be considered to have a term of one year or less in applying paragraph .59, item (*b*) of this SOP. Accordingly, revenue allocable to telephone support may be recognized together with the initial licensing fee on delivery of the software if all the conditions in paragraph .59 of this SOP are met. This provision applies only to telephone support provided at no additional charge. If revenue allocable to telephone support is recognized together with the licensing fee on delivery, the vendor should accrue the estimated cost of providing that support.

.62*PCS Granted by Resellers.* An arrangement in which a vendor grants a reseller the right to provide unspecified upgrades/enhancements to the reseller's customers is an implied PCS arrangement between the vendor and the reseller, even if the vendor does not provide direct telephone support to the reseller's customers. If sufficient vendor-specific objective evidence does not exist to allocate the fee to the software and the PCS, revenue from both the licensing arrangement and the PCS should be recognized ratably over the period during which PCS is expected to be provided.

Services

.63 Certain arrangements include both software and service elements (other than PCS- related services). The services may include training, installation, or consulting. Consulting services often include implementation support, software design or development, or the customization or modification of the licensed software.

.64 If an arrangement includes such services, a determination must be made as to whether the service element can be accounted for separately as the services are performed. Paragraph .65 discusses the criteria that must be considered in making such a determination. If the nature of the services is such that the service element does not qualify for separate accounting as a service, contract accounting must be applied to both the software and service elements included in the arrangement. Paragraphs .74 through .91 of this SOP address the application of contract accounting to software arrangements.

.65 In order to account separately for the service element of an arrangement that includes both software and services, sufficient vendor-specific objective evidence of fair value must exist to permit allocation of the revenue to the various elements of the arrangement (as discussed in paragraphs .10 and .12). Additionally, the services (*a*) must not be essential to the functionality of any other element of the transaction and (*b*) must be described in the contract such that the total price of the arrangement would be expected to vary as the result of the inclusion or exclusion of the services.

.66 If an arrangement includes services that meet the criteria of paragraph .65 for separate accounting, revenue should be allocated among the service and software elements of the contract. This allocation should be based on vendor-specific objective evidence of fair values. (Fair values are not necessarily the same as any separate prices stated for the separate elements of the arrangement.) Revenue allocated to the service element should be recognized as the services are performed or, if no pattern of performance is discernible, on a straight-line basis over the period during which the services are performed.

.67 If vendor-specific objective evidence of the fair value does not exist to allocate a portion of the fee to the service element, and the only undelivered element is services that do not involve significant production, modification, or customization of the software (for example, training or installation), the entire arrangement fee should be recognized as the services are performed. If no pattern of performance is discernible, the entire arrangement fee should be recognized on a straight-line basis over the period during which the services are performed.

.68 An important factor to consider in determining whether the services are essential to the functionality of any other element is whether the software included in the arrangement is considered **core** or **off-the-shelf software**. Core software is software that a vendor uses in creating other software. It is not sold as is because customers cannot use it unless it is customized to meet system objectives or customer specifications. Off-the-shelf software is software that is marketed as a stock item that can be used by customers with little or no customization.

.69 Software should be considered off-the-shelf software if it can be added to an arrangement with insignificant changes in the underlying code and it could be used by the customer for the customer's purposes upon installation. Actual use by the customer and performance of other elements of the arrangement is not required to demonstrate that the customer could use the software off-the-shelf. If significant modifications or additions to the off-the-shelf software are necessary to meet the customer's purpose (for example, changing or making additions to the software, or because it would not be usable in its off-the-shelf form in the customer's environment), the software should be considered core software for purposes of that arrangement. If the software that is included in the arrangement is not considered to be off-the-shelf software, or if significant modifications or additions to the off-the-shelf software are necessary to meet the customer's functionality, no element of the arrangement would qualify for accounting as a service, and contract accounting should be applied to both the software and service elements of the arrangement.

.70 Factors indicating that the service element is essential to the functionality of the other elements of the arrangement, and consequently should not be accounted for separately, include the following.

- The software is not off-the-shelf software.
- The services include significant alterations to the features and functionality of the off-the-shelf software.
- Building complex interfaces is necessary for the vendor's software to be functional in the customer's environment.
- The timing of payments for the software is coincident with performance of the services.
- **Milestones** or customer-specific acceptance criteria affect the realizability of the software-license fee.

.71 Judgment is required in determining whether the obligation to provide services in addition to the delivery of software should be accounted for separately as a service element. Services that qualify for accounting as a service element of a software arrangement always are stated separately and have one or more of the following characteristics.

- The services are available from other vendors.
- The services do not carry a significant degree of risk or unique acceptance criteria.
- The software vendor is an experienced provider of the services.
- The vendor is providing primarily implementation services, such as implementation planning, loading of software, training of customer personnel, data conversion, building simple interfaces, running test data, and assisting in the development and documentation

of procedures.

- Customer personnel are dedicated to participate in the services being performed.

.72*Funded Software-Development Arrangements*. Software-development arrangements that are fully or partially funded by a party other than the vendor that is developing the software typically provide the funding party with some or all of the following benefits:

- Royalties payable to the funding party based solely on future sales of the product by the software vendor (that is, reverse royalties)

- Discounts on future purchases by the funding party of products produced under the arrangement

- A nonexclusive sublicense to the funding party, at no additional charge, for the use of any product developed (a prepaid or paid-up nonexclusive sublicense)

.73 A funded software-development arrangement within the scope of FASB Statement No. 68, *Research and Development Arrangements*, should be accounted for in conformity with that Statement. If the technological feasibility of the computer software product pursuant to the provisions of FASB Statement No. 86 has been established before the arrangement has been entered into, FASB Statement No. 68 does not apply because the arrangement is not a research and development arrangement. Accounting for costs related to funded software-development arrangements is beyond the scope of this SOP. However, if capitalization of the software-development costs commences pursuant to FASB Statement No. 86, any income from the funding party under a funded software-development arrangement should be credited first to the amount of the development costs capitalized. If the income from the funding party exceeds the amount of development costs capitalized, the excess should be deferred and credited against future amounts that subsequently qualify for capitalization. Any deferred amount remaining after the project is completed (that is, when the software is available for general release to customers and capitalization has ceased) should be credited to income.

Contract Accounting

.74 If an arrangement to deliver software or a software system, either alone or together with other products or services, requires significant production, modification, or customization of software, the service element does not meet the criteria for separate accounting set forth in paragraph .65. The entire arrangement should be accounted for in conformity with ARB No. 45, using the relevant guidance in SOP 81-1 [section 10,330]. Nevertheless, transactions that normally are accounted for as product sales should not be accounted for as long-term contracts merely to avoid the delivery requirements normally associated with product sales for revenue recognition.

.75 In applying contract accounting, the vendor must use either the percentage-of- completion method or the completed-contract method. The determination of the appropriate method should be made according to the recommendations in paragraphs 21 through 33 of SOP 81-1 [section 10,330.21 through .33].

.76*Segmentation*. Software contracts may have discrete elements that meet the criteria for segmenting in paragraphs 39 through 42 of SOP 81-1 [section 10,330.39 through .42]. If a contract is segmented, each segment is treated as a separate profit center. Progress-to-completion for each segment should be measured in conformity with paragraphs .78 through .80 of this SOP.

.77 Some vendors of arrangements that include software combined with services or hardware or both do not identify the elements separately and do not sell them separately because of agreements with their suppliers. Other vendors who are not restricted by such agreements nevertheless bid or negotiate software and other products and services together. Arrangements that do not meet the segmentation criteria in paragraph 40 of SOP 81-1 [section 10,330.40] are prohibited from being segmented, unless the vendor has a history of providing the software and other products and services to customers under separate arrangements and the arrangement meets the criteria in paragraph 41 of SOP 81-1 [section 10,330.41].

.78 *Measuring Progress-to-Completion Under the Percentage-of-Completion Method*. Paragraph 46 of SOP 81-1 [section 10,330.46] describes the approaches to measuring progress on contracts (or segments thereof) under the percentage-of-completion method. Those approaches are grouped into input and output measures, as follows.

Input measures are made in terms of efforts devoted to a contract. They include the methods based on costs and on efforts expended. Output measures are made in terms of results achieved. They include methods based on units produced, units delivered, contract milestones, and value added. For contracts under which separate units of output are produced, progress can be measured on the basis of units of work completed.

For software contracts, an example of an input measure is labor hours; an example of an output measure is arrangement milestones, such as the completion of specific program modules.

.79 If, as discussed in paragraph .76 of this SOP, a software contract includes a discrete element that meets the segmentation criteria of SOP 81-1 [section 10,330], the method chosen to measure progress-to-completion on the element should be the method that best approximates progress-to-completion. Progress-to-completion on separate elements of the same software arrangement may be measured by different methods. The software vendor should choose measurement methods consistently, however, so that it uses similar methods to measure progress-to-completion on similar elements.

.80 Output measures, such as value-added or arrangement milestones, may be used to measure progress-to-completion on software arrangements, but many companies use input measures because they are established more easily. As noted in paragraph 47 of SOP 81-1 [section 10,330.47], "The use of either type of measure requires the exercise of judgment and the careful tailoring of the measure to the circumstances." Further, paragraph 51 of SOP 81-1 [section 10,330.51] states that

The acceptability of the results of input or output measures deemed to be appropriate to the circumstances should be periodically reviewed and confirmed by alternative measures that involve observation and inspection. For example, the results provided by the measure used to determine the extent of progress may be compared to the results of calculations based on physical observations by engineers, architects, or similarly qualified personnel. That type of review provides assurance somewhat similar to that provided for perpetual inventory records by periodic physical inventory counts.

.81 *Input Measures*. Input measures of progress-to-completion on arrangements are made in terms of efforts devoted to the arrangement and, for software arrangements, include methods based on costs, such as cost-to-cost measures, and on efforts expended, such as labor hours or labor dollars. Progress-to-completion is measured indirectly, based on an established or assumed relationship between units of input and productivity. A major advantage of input measures is that inputs expended are easily verifiable. A major disadvantage is that their relationship to progress-to-completion may not hold if inefficiencies exist or if the incurrence of the input at a particular

point does not indicate progress-to-completion.

.82 Costs incurred should be included in measuring progress-to-completion only to the extent that they relate to contract performance. Items not specifically produced for the arrangement, such as hardware purchased from third parties or off-the-shelf software, should not be included in the measurement of progress-to-completion.

.83 Labor hours often are chosen as the basis for measuring progress-to-completion, because they closely approximate the output of labor-intensive processes and often are established more easily than output measures. Core software requires labor-intensive customization. Therefore, labor hours provide a good measure of progress-to-completion on elements of software arrangements that involve the customization of core software.

.84 If the measurement of progress-to-completion is based primarily on costs, the contribution to that progress of hardware and software that were produced specifically for the arrangement may be measurable and recognizable before delivery to the user's site. For example, efforts to install, configure, and customize the software may occur at the vendor's site. The costs of such activities are measurable and recognizable at the time the activities are performed.

.85*Output Measures*. Progress on arrangements that call for the production of identifiable units of output can be measured in terms of the value added or milestones reached. Although progress-to-completion based on output measures is measured directly from results achieved, thus providing a better approximation of progress than is provided by input measures, output measures may be somewhat unreliable because of the difficulties associated with establishing them.

.86 In order for the value added to be verifiable, the vendor must identify elements or subcomponents of those elements. If output measures are neither known nor reasonably estimable, they should not be used to measure progress-to-completion.

.87 If value added by off-the-shelf software is to be included in the measurement of progress-to-completion, such software cannot require more than minor modifications and must be usable by the customer for the customer's purpose in the customer's environment. If more than minor modifications or additions to the off-the-shelf software are necessary to meet the functionality required under the arrangement terms, either by changing or making additions to the software, or because the software would not be usable by the customer in its off-the-shelf form for the customer's purpose in the customer's environment, it should be accounted for as core software.

.88 Value added by the customization of core software should be included in the measurement of progress-to-completion of the customization and installation at the user's site. However, if the installation and customization processes are divided into separate output modules, the value of core software associated with the customization of a module should be included in the measurement of progress-to-completion when that module is completed.

.89 Contract milestones may be based on contractual project plans. Contractual provisions generally require the performance of specific tasks with the approval or acceptance by the customer; project plans generally schedule inspections in which the project's status is reviewed and approved by management. The completion of tasks that trigger such inspections are natural milestones because they are subject to relatively independent review as an intrinsic part of the project management process.

.90 Considerations other than progress-to-completion affect the amounts that become billable at particular times under many arrangements. Accordingly, although the achievement of contract milestones may cause arrangement revenues to become billable under the arrangement, the

amounts billable should be used to measure progress-to-completion only if such amounts indeed indicate such progress.

.91 The milestones that are selected to measure progress-to-completion should be part of the management review process. The percentage-of-completion designated for each milestone should be determined considering the experience of the vendor on similar projects.

Effective Date and Transition

.92 This SOP is effective for transactions entered into in fiscal years beginning after December 15, 1997. Earlier application is encouraged as of the beginning of fiscal years or interim periods for which financial statements or information have not been issued. Retroactive application of the provisions of this SOP is prohibited. [*Note:* An effective date provision of this SOP has been deferred by SOP 98-4. See section 10,740.]

The provisions of this Statement need not be applied to immaterial items.

Basis for Conclusions

Background

.93 SOP 91-1 was issued in December 1991. AcSEC understands that certain provisions of that Statement are being applied inconsistently in practice and that various practice issues have arisen that were not addressed in SOP 91-1. As a result, AcSEC added a project to its agenda in March 1993 to interpret those provisions and provide additional guidance. The key issues identified at the outset of the project related to accounting for arrangements that provided for multiple deliverables (including PCS). The project began as an amendment to SOP 91-1. However, as deliberations progressed, AcSEC determined that it would be more appropriate to supersede SOP 91-1 to (*a*) amend the provisions in question and (*b*) incorporate AcSEC's conclusions on practice issues that had not been addressed in SOP 91-1.

Basic Principles

.94 Transfers of rights to software by licenses rather than by outright sales protect vendors from the unauthorized duplication of their products. Nevertheless, the rights transferred under software licenses are substantially the same as those expected to be transferred in sales of other kinds of products. AcSEC believes the legal distinction between a license and a sale should not cause revenue recognition on software products to differ from revenue recognition on the sale of other kinds of products.

.95 Arrangements to deliver software or a software system, either alone or together with other products, may include services. AcSEC believes that if those services entail significant production, modification, or customization of the software, such software before those alterations (even if already delivered) is not the product that has been purchased by the customer. Instead, the product purchased by the customer is the software that will result from the alterations. Accordingly, AcSEC concluded that arrangements that include services that entail significant production, modification, or customization of software are construction-type or production-type contracts, and should be accounted for in conformity with ARB No. 45 and SOP 81-1 [10,330]. AcSEC concluded that if the services do not entail significant production, modification, or customization of software, the service element should be accounted for as a separate element.

.96 AcSEC believes that revenue generally should not be recognized until the element has been delivered. The recognition of revenue from product sales on delivery is consistent with paragraphs 83(b) and 84 of FASB Concepts Statement No. 5, *Recognition and Measurement in Financial Statements of Business Enterprises*. Paragraph 83(b) provides the following guidance for recognition of revenues.

Revenues are not recognized until earned. An entity's revenue-earning activities involve *delivering* or producing goods, rendering services, or other activities that constitute its ongoing major or central operations, and revenues are considered to have been earned when the entity has substantially accomplished what it must do to be entitled to the benefits represented by the revenues. [Footnote omitted][Emphasis added]

Paragraph 84 states that in recognizing revenues and gains

[t]he two conditions [for revenue recognition] (being realized or realizable and being earned) are usually met by the time the product or merchandise is delivered...to customers, and revenues...are commonly recognized at time of sale (usually meaning *delivery*). [Emphasis added]

.97 SOP 91-1 did not address arrangements that included software that was deliverable only when-and-if-available. Implementation questions arose as to whether when-and-if-available terms created contingencies that could be disregarded in determining whether an arrangement consists of multiple elements. AcSEC believes that because the when-and-if-available deliverables are bargained for in arrangements, they are of value to the customer. Accordingly, AcSEC concluded that when-and-if-available deliverables should be considered in determining whether an arrangement consists of multiple elements. Thus, the requirements of this SOP with respect to arrangements that consist of multiple elements should be applied to all additional products and services specified in the arrangement, including those described as being deliverable only when-and-if-available.

.98 In SOP 91-1, the accounting for vendor obligations remaining after delivery of the software was dependent upon whether the obligation was significant or insignificant. However, these determinations were not being made in a consistent manner, leading to a diversity in practice. AcSEC believes that all obligations should be accounted for and that revenue from an arrangement should be allocated to each element of the arrangement, based on vendor-specific objective evidence of the fair values of the elements. Further, AcSEC concluded that revenue related to a particular element should not be recognized until the revenue-recognition conditions in paragraphs .08 through .14 of this SOP are met, because the earnings process related to that particular element is not considered complete until that time.

.99 In paragraph .10 of this SOP, AcSEC concluded that the revenue from an arrangement should be allocated to the separate elements based on vendor-specific objective evidence of fair value, regardless of any separate prices stated in the contract for each element. AcSEC believes that separate prices stated in a contract may not represent fair value and, accordingly, might result in an unreasonable allocation of revenue. AcSEC believes that basing the allocation on fair values is consistent with the accounting for commingled revenue. An example is the following discussion in paragraph 12 of FASB Statement No. 45, *Accounting for Franchise Fee Revenue*.

The franchise agreement ordinarily establishes a single initial franchise fee as consideration for the franchise rights and the initial services to be performed by the franchisor. Sometimes, however, the fee also may cover tangible property, such as signs, equipment, inventory, and land and building. In those circumstances, the portion of the fee applicable to the tangible assets shall be based on the fair value of the assets.

.100 AcSEC considered allowing the use of surrogate prices such as competitor prices for similar products or industry averages to determine fair value. However, AcSEC believes that inherent differences exist between elements offered by different vendors. These inherent differences led AcSEC to conclude that only vendor-specific evidence of fair value can be considered sufficiently objective to allow the allocation of the revenue to the various elements of the arrangement.

.101 AcSEC believes that the best evidence of the fair value of an element is the price charged if that element is sold separately. Still, an arrangement may include elements that are not yet being sold separately. As discussed in the previous paragraph, because of inherent differences between the elements offered by different vendors, AcSEC concluded that companies should not use surrogate prices, such as competitor prices for similar products or industry averages, as evidence of the fair value for an element. AcSEC believes, however, that if a price for the element has been established by management having the relevant authority, such a price represents evidence of the fair value for that element. To meet the criterion of objectivity, it must be probable that the established price will not change before the introduction of the element to the marketplace. Thus, the internally established prices should be factual and not estimates. For this reason, AcSEC concluded that the allocations may not be adjusted subsequently.

.102 AcSEC is aware that the pricing structure of certain arrangements is not limited to the prices charged for the separate elements. Pricing may be based on many different factors or combinations thereof. For example, certain arrangements are priced based on a combination of (*a*) the prices of products to be licensed and (*b*) the number of users that will be granted access to the licensed products. In some of these arrangements, the vendor requires a minimum number of users.

.103 The products contained in such arrangements are not available to the customer at the prices charged in the arrangement unless the customer also pays for the minimum number of users. Therefore, the prices contained in the arrangement do not represent the prices charged for the product when sold separately. AcSEC believes that it would be inappropriate to determine the fair values of the products (as discussed in paragraph .10) without giving consideration to the impact of the user-based portion of the fee. For this reason, AcSEC concluded in paragraph .10 that when a vendor's pricing is based on multiple factors such as the number of products and the number of users, the price charged for the same element when sold separately must consider all factors of the vendor's pricing structure.

.104 Often, multiple element arrangements are sold at a discount rather than at the sum of the list prices for each element. If the amounts deferred for undelivered elements were based on list prices, the amount of revenue recognized for delivered elements would be understated. Accordingly, AcSEC concluded that relative sales prices should be used in determining the amount of revenue to be allocated to the elements of an arrangement.

.105 AcSEC believes that if an undelivered element is essential to the functionality of a delivered element, the customer does not have full use of the delivered element. Consequently, AcSEC concluded that delivery is considered not to have occurred in such situations.

.106 AcSEC believes that the earnings process with respect to delivered products is not complete if fees allocated to those products are subject to forfeiture, refund, or other concession if the vendor does not fulfill its delivery responsibilities. AcSEC believes that the potential concessions indicate the customer would not have licensed the delivered products without also licensing the undelivered products. Accordingly, AcSEC concluded that in order to recognize revenue, persuasive evidence should exist that fees allocated to delivered products are *not* subject to forfeiture, refund, or other concession. In determining the persuasiveness of the evidence, AcSEC believes that a vendor's history of making concessions that were not required by the provisions of an arrangement is more persuasive than terms included in the arrangement

that indicate that no concessions are required.

Delivery

.107 In paragraph .18 of this SOP, AcSEC concluded that for software that is delivered electronically, the delivery criterion of paragraph .08 is deemed to have been met when the customer either (*a*) takes possession of the software via a download or (*b*) has been provided with access codes that allow the customer to take immediate possession of the software on its hardware pursuant to an agreement or purchase order for the software. AcSEC believes that the delivery criterion is met by use of access codes only when software is being delivered electronically.

.108 AcSEC believes that if the fee is not based on the number of copies to be delivered to or made or deployed by the customer, duplication of the software may be incidental to the arrangement. Paragraph .21 of this SOP describes circumstances (arrangements in which duplication is required only if additional copies are requested by the customer; arrangements in which the licensing fee is payable even if no additional copies are requested) that would lead to a conclusion that duplication is incidental to the arrangement. In other arrangements, vendors insist on duplicating the software to maintain quality control or to protect software transmitted by telecommunications. Others agree to duplicate the software as a matter of convenience to the customer.

.109 In arrangements in which duplication is considered incidental, AcSEC believes the vendor has fulfilled its delivery obligation as soon as the first copy or product master of the software has been delivered. Therefore, AcSEC concluded that in such instances, the vendor should not be precluded from recognizing revenue if the customer has not requested additional copies (particularly since the fee is payable regardless of whether such additional copies are requested by the customer). However, the estimated costs of duplicating the software should be accrued when the revenue is recognized.

Fixed or Determinable Fees and Collectibility

.110 In paragraphs .27 through .30, in the discussion of factors that affect the determination of whether a fee is fixed or determinable, AcSEC sought to clarify-but not change-similar provisions in SOP 91-1. In practice, some had interpreted those provisions to mean the following.

- Extended payment considerations could be overcome if customers were creditworthy.
- A fee could never be considered fixed or determinable if payment terms extended for more than twelve months after delivery.

.111 Others had interpreted these provisions to mean the following.

- If payment terms extended beyond customary terms but were twelve months or less, they were fixed or determinable.
- If payment terms exceeded twelve months, a vendor could recognize amounts due in the first twelve months as revenue at the time of the license. Additional revenue would be recognized based on the passage of time such that, at any point, any amounts due within one year would have been recognized as revenue (the *rolling twelve months* approach).

Paragraphs .112 through .114 of this SOP-

- Explain that the concern with extended payment terms is technological obsolescence and

similar factors, not customer creditworthiness.

- Describe circumstances in which the presumption that a fee is not fixed or determinable because of extended payment terms may be overcome.

- Confirm that any extended payment terms, even if for less than twelve months, must be assessed for their effects on the fixed or determinable aspects of the fee.

- Clarify that the rolling twelve months approach should not be used.

.112 AcSEC believes that, given the susceptibility of software to significant external factors (in particular, technological obsolescence), the likelihood of vendor refunds or concessions is greater in an arrangement with extended payment terms than in an arrangement without extended payment terms. This is true regardless of the creditworthiness of the customer. Because of this greater likelihood of refunds or concessions, AcSEC believes that *any* extended payment terms outside of a vendor's normal business practices may indicate that the fee is not fixed or determinable.

.113 In paragraph .28 of this SOP, AcSEC concluded that if payment of a significant portion of a licensing fee is not due until after the expiration of the license or more than twelve months after delivery, the fee should be *presumed* not to be fixed or determinable. This conclusion is based on AcSEC's belief that payment terms of such extended duration indicate that vendor refunds or concessions are more likely than not. AcSEC acknowledges that the one-year provision is arbitrary. However, AcSEC concluded that such a limitation is needed to provide greater comparability within the industry.

.114 In considering the "rolling twelve months" approach found in practice, AcSEC considered the guidance in Chapter 1A of ARB No. 43, *Restatement and Revision of Accounting Research Bulletins*, paragraph 1, which states that "Profit is deemed to be realized when a sale in the ordinary course of business is effected, unless the circumstances are such that the collection of the sale price is not reasonably assured." Accordingly, if a fee is considered fixed or determinable, it should be recognized as revenue when the sale is effected. If not, AcSEC believes that it should be recognized as revenue as payments from customers become due.

.115 In paragraph .08 of this SOP, AcSEC concluded that collectibility must be probable before revenue may be recognized. This conclusion is based on paragraph 84g of FASB Concepts Statement No. 5, which reads

If collectibility of assets received for product, services, or other assets is doubtful, revenues and gains may be recognized on the basis of cash received.

.116 AcSEC notes that requiring collectibility enhances the verifiability of the other revenue recognition criteria of paragraph .08, as discussed below.

- *Persuasive evidence of an arrangement*-AcSEC included this criterion in order to prevent revenue recognition on delivery of elements which, in fact, had not been ordered by a customer. AcSEC believes it is unlikely that a customer would pay for an element that had not been ordered. Therefore, AcSEC believes that requiring collectibility of a receivable related to the sale or license acts to verify that an arrangement does exist.

- *Delivery*-AcSEC believes that until delivery of an element has occurred (including delivery of all other items essential to the functionality of the element in question), the customer has not received full use of the element ordered. A customer that has not received full

use of the element ordered is likely to withhold payment or require a refund. Therefore, AcSEC believes that requiring collectibility of a receivable related to the sale or license acts to verify that the element has been delivered.

- *Fixed or determinable fee*-Much of AcSEC's concern related to fixed or determinable fees relates to arrangements with extended payment terms. In the software industry, requiring collectibility of a receivable prior to revenue recognition is important because of the frequency with which upgrades, enhancements, or new versions are released. As discussed elsewhere in this SOP, in certain instances it may be difficult to determine which version of an element induced a customer to enter into an arrangement. By requiring collectibility, AcSEC sought to prevent revenue recognition on sales or licenses of an element in situations in which circumstances may prompt the vendor to make subsequent adjustments to the price of a customer's purchase or license of a subsequent version of that element.

The likelihood that subsequent versions will be released is greater over the long term than over the short term. Therefore, concerns related to concessions increase in arrangements with extended payment terms. AcSEC notes that prohibiting revenue recognition in circumstances in which the price adjustments discussed above could occur serves to ensure that the portion of the fee allocated to each element is fixed or determinable. That is, if the price on a subsequent element cannot be adjusted for concessions, and the amount allocated to the initial element must be collected in full, neither amount is subject to adjustment. Therefore, AcSEC believes that requiring collectibility of a receivable related to the sale or license acts to verify that the fees are fixed or determinable.

Multiple-Element Arrangements

Additional Software Deliverables and Right to Exchange or Return Software

.117 *Upgrades/enhancements*. In paragraph .37 of this SOP, AcSEC concluded that the portion of the arrangement fee allocated to an upgrade right should be based on the price for the upgrade/enhancement that would be charged to existing users of the software product being updated. AcSEC believes that in arrangements that include upgrade rights, it may be difficult to determine which version of the software induced the customer to enter into the arrangement. For example, a customer licensing an existing version of the software may have done so to facilitate obtaining the updated version upon its introduction. To eliminate the possibility of allocating too much revenue to the delivered software (and thereby accelerating recognition), AcSEC concluded that the upgrade price (without the allocation of any discount on the arrangement) should be used to determine the amount to be deferred. The residual amount, if any, is considered to be the fair value of the original product.

.118 AcSEC believes that upgrades/enhancements do not necessarily contain improvements that all customers would desire. A customer may not exercise an upgrade right for various reasons, including any of the following.

a. The benefits to be gained from the related upgrade/enhancement may not be important to that customer.

b. The customer may not wish to learn new commands for what may be perceived by that customer as marginal improvements.

c. The upgrade/enhancement would require more hardware functionality than the customer currently has.

Consequently, AcSEC concluded that amounts allocated to upgrade rights should be reduced to reflect the percentage of customers not expected to exercise the upgrade right, based on vendor-specific evidence.

.119 *Additional Software Products.* As stated in paragraph .118, AcSEC believes that not all customers entitled to an upgrade/enhancement will exercise their upgrade rights. AcSEC believes, however, that it is probable that all customers will choose to receive additional software products. Consequently, AcSEC concluded that the fee allocated to additional software products should not be reduced by the percentage of any customers not expected to exercise the right to receive the additional products.

.120 Paragraphs .48 and .49 of this SOP discuss accounting for software arrangements in which vendors agree to deliver unspecified additional software products in the future. AcSEC concluded that such arrangements should be accounted for as subscriptions, and that the fee from the arrangement should be recognized ratably as revenue over the term of the arrangement. AcSEC notes that, because the vendor is obligated to deliver these items only if they become available during the term of the arrangement, in some situations, the delivery of additional products will not be required. AcSEC believes that because these items are unspecified, vendor-specific objective evidence of fair value of each unspecified additional product cannot exist. However, AcSEC believes that requiring the deferral of all revenue until the end of the arrangement is too onerous because of the following.

a. All other revenue-recognition conditions in paragraphs .08 through .14 of this SOP have been met.

b. The additional software products in fact may never be delivered.

However, AcSEC also was concerned that if revenue recognition were permitted to begin at the inception of the arrangement, revenue may be recognized too early, particularly in arrangements in which the first product was not delivered for some time after inception. Accordingly, AcSEC concluded that revenue from the arrangement should be recognized ratably over the term of the arrangement beginning with the delivery of the first product.

.121 *Rights to Exchange or Return Software.* AcSEC believes that the rights to exchange or return software (including platform transfer rights) are subject to the provisions of FASB Statement No. 48, even if the software is not returned physically. Accordingly, AcSEC concluded that the accounting for exchanges of software for products with no more than minimal differences in price, functionality, and features by users qualify for exchange accounting because, as discussed in footnote 3 to FASB Statement No. 48, (*a*) users are "ultimate customers" and (*b*) exchanges of software with no more than minimal differences in price, functionality, and features represent "exchanges ... of one item for another of the same kind, quality, and price." AcSEC concluded that because resellers are not "ultimate customers," such exchanges by resellers should be considered returns.

.122 AcSEC reached similar conclusions related to certain platform-transfer rights. Additionally, AcSEC concluded that in situations in which customers are entitled to continue using the software that was originally delivered (in addition to the software that is to be delivered for the new platform), the customer has received additional software products, and the platform-transfer right should be accounted for as such. Other platform-transfer rights do not allow customers to continue to use the software on the original platform. Those platform-transfer rights should be accounted for as exchange rights or rights of return.

.123 It is possible that exchange rights may be granted for software that has not been developed for other platforms at the time revenue from the arrangement is recorded. AcSEC did not address

the issue of whether such future development costs related to deliverable software, for which no further revenue will be received, should be capitalized pursuant to FASB Statement No. 86 because it was believed that such costs would not be significant. Accordingly, AcSEC concluded that in the event of significant development costs, the vendor would not be likely to be able to demonstrate persuasively that the future software would have similar pricing, features, and functionality, and would be marketed as the same product (that is, qualify as an exchange for accounting purposes). In that event, the vendor has granted a return right that must be accounted for pursuant to FASB Statement No. 48.

Postcontract Customer Support

.124 An obligation to perform PCS is incurred at the inception of a PCS arrangement and is discharged by delivering unspecified upgrades/enhancements, performing services, or both over the period of the PCS arrangement. The obligation also may be discharged by the passage of time. AcSEC concluded that because estimating the timing of expenditures under a PCS arrangement usually is not practicable, revenue from PCS generally should be recognized on a straight-line basis over the period of the PCS arrangement. However, AcSEC also concluded that if there is sufficient vendor-specific historical evidence that costs to provide the support are incurred on other than a straight-line basis, the vendor should recognize revenue in proportion to the amounts expected to be charged to the PCS services rendered during the period.

.125 SOP 91-1 required that revenue from both the PCS and the initial licensing fee be recognized ratably over the period of the PCS arrangement if no basis existed to derive separate prices for the PCS and the initial licensing fee. Diversity in practice arose as to what constituted a sufficient basis in arrangements involving vendors that did not have a basis to derive a separate price for the PCS. In this SOP, AcSEC has concluded that arrangement fees must be allocated to elements of the arrangement based on vendor-specific objective evidence of fair value. Because AcSEC determined that the evidence should be limited to that which is specific to the vendor, AcSEC believes that vendors that do not sell PCS separately have no basis on which to allocate fair values. AcSEC concluded that the total arrangement fee should be recognized in accordance with the provisions on recognition of PCS revenues. AcSEC also believes that, because a substantial portion of the arrangement fee typically is represented by the delivered software (rather than the performance of support), requiring the deferral of all revenues until the PCS obligation is fully satisfied would be too onerous. Accordingly, AcSEC concluded that, as discussed in the previous paragraph, the total arrangement fee generally should be recognized ratably over the period of the PCS arrangement.

Services

.126 Certain software arrangements include both a software element and an obligation to perform non-PCS services. SOP 91-1 provided guidance on the conditions that must be met in order to account for the obligation to provide services separately from the software component. AcSEC is aware that this guidance has been interpreted in varying ways, leading to a diversity in practice. During its deliberations on this SOP, AcSEC reached conclusions intended to clarify this issue, but did not redeliberate the other conclusions related to services that were included in SOP 91-1.

.127 AcSEC believes the service element should be accounted for separately if the following occur.

a. All other revenue allocation provisions of this SOP are met.

b. The services are not essential to the functionality of any other element in the arrangement.

c. The service and product elements are stated separately such that the total price of the arrangement would vary as a result of inclusion or exclusion of the services.

Accordingly, AcSEC concluded that a service element need not be *priced* separately in an agreement in order to account for the services separately. AcSEC believes that this conclusion represents the original intent of SOP 91-1, and wishes to clarify the language at this time.

.128 Paragraphs .129 through .132 of this SOP are carried forward from SOP 91-1 with certain editorial changes.

.129*Service Elements.* Footnote 1 to paragraph 11 of SOP 81-1 [section 10,330.11, footnote 1] excludes service transactions from the scope of the SOP, as follows.

This statement is not intended to apply to "service transactions" as defined in the FASB's October 23, 1978 Invitation to Comment, *Accounting for Certain Service Transactions*. However, it applies to separate contracts to provide services essential to the construction or production of tangible property, such as design . . . [and] engineering . . . .

.130 The previously mentioned Invitation to Comment, which was based on an AICPA-proposed SOP, was issued in 1978. The FASB later included service transactions as part of its project to develop general concepts for revenue recognition and measurement. The resulting FASB Concepts Statement No. 5, however, does not address service transactions in detail. Nevertheless, some of the concepts on service transactions developed in the Invitation to Comment are useful in accounting for certain software transactions.

.131 A service transaction is defined in paragraphs 7 and 8 of the Invitation to Comment as follows.

A transaction between a seller and a purchaser in which, for a mutually agreed price, the seller performs . . . an act or acts . . . that do not alone produce a tangible commodity or product as the principal intended result . . . A service transaction may involve a tangible product that is sold or consumed as an incidental part of the transaction or is clearly identifiable as secondary or subordinate to the rendering of the service.

The term *service transaction* is used in the same sense in this SOP but, as used in this SOP, does not apply to PCS. Items classified as tangible products in software service transactions generally should be limited to off-the-shelf software or hardware.

.132 This SOP, like the Invitation to Comment, recommends the separation of such arrangements with discrete elements into their product and service elements. Paragraph 8(b) of the Invitation to Comment states the following.

If the seller of a product offers a related service to purchasers of the product but separately states the service and product elements in such a manner that the total transaction price would vary as a result of the inclusion or exclusion of the service, the transaction consists of two components: a product transaction that should be accounted for separately as such and a service transaction . . . .

Contract Accounting

.133 SOP 91-1 included guidance on the application of contract accounting to software transactions. Questions arose as to whether output measures could be used to measure progress-to-completion if the amounts recorded would differ from those that would have been

reported had input measures been used. During its deliberations of this SOP, AcSEC reached conclusions intended to clarify this issue, but did not redeliberate the other conclusions related to services that were included in SOP 91-1.

.134 AcSEC believes that the method chosen to measure progress-to-completion on an individual element of a contract should be the method that best approximates progress-to-completion on that element. Accordingly, AcSEC concluded that output measures may be used to measure progress-to-completion, provided that the use of output measures results in "the method that best approximates progress-to-completion."

.135 Paragraphs .136 through .142 of this SOP are carried forward from SOP 91-1 with certain editorial changes.

.136 ARB No. 45 established the basic principles for measuring performance on contracts for the construction of facilities or the production of goods or the provision of related services with specifications provided by the customer. Those principles are supplemented by the guidance in SOP 81-1 [section 10,330].

Distinguishing Transactions Accounted for Using Contract Accounting From Product Sales

.137 SOP 81-1 [section 10,330] suggests that transactions that normally are accounted for as product sales should not be accounted for using contract accounting merely to avoid the delivery requirements for revenue recognition normally associated with product sales. Paragraph 14 of SOP 81-1 [section 10,330.14] states the following:

Contracts not covered . . . include . . . [s]ales by a manufacturer of goods produced in a standard manufacturing operation, even if produced to buyers' specifications, and sold in the ordinary course of business through the manufacturer's regular marketing channels if such sales are normally recognized as revenue in accordance with the realization principle for sales of products and if their costs are accounted for in accordance with generally accepted principles of inventory costing.

Application of ARB No. 45 and SOP 81-1

.138 SOP 81-1 [section 10,330] provides guidance on the application of ARB No. 45 that applies to a broad range of contractual arrangements. Paragraph 1 of SOP 81-1 [section 10,330.01] describes contracts that are similar in nature to software arrangements, and paragraph 13 [section 10,330.13] includes the following kinds of contracts within the scope of that SOP:

- Contracts to design, develop, manufacture, or modify complex . . . electronic equipment to a buyer's specification or to provide services related to the performance of such contracts
- Contracts for services performed by . . . engineers . . . or engineering design firms

.139 ARB No. 45 presumes that percentage-of-completion accounting should be used when the contractor is capable of making reasonable estimates. Paragraph 15 of ARB No. 45 states the following:

[I]n general when estimates of costs to complete and extent of progress toward completion of long-term contracts are reasonably dependable, the percentage-of-completion method is

preferable. When lack of dependable estimates or inherent hazards cause forecasts to be doubtful, the completed-contract method is preferable.

Evidence to consider in assessing the presumption that the percentage-of-completion method of accounting should be used includes the technological risks and the reliability of cost estimates, as described in paragraphs 25, 26, 27, 32, and 33 of SOP 81-1 [section 10,330.25, .26, .27, .32, and .33].

.140 Paragraph 24 of SOP 81-1 [section 10,330.24] specifies a further presumption that a contractor is capable of making reasonable estimates and states the following:

[T]he presumption is that [entities] . . . have the ability to make estimates that are sufficiently dependable to justify the use of the percentage-of-completion method of accounting. Persuasive evidence to the contrary is necessary to overcome that presumption. [Footnote omitted]

.141 Although cost-to-cost measures may be verified easily, they tend to attribute excessive profit to the hardware elements of arrangements with combined software and hardware elements for contracts under which segmentation is not permitted. Although the hardware elements of such arrangements have high cost bases, they generally yield relatively low profit margins to vendors. Furthermore, if excessive revenue is attributed to the hardware element, revenue recognition on the arrangement becomes overly dependent on when that element is included in the measurement of progress-to-completion.

.142 For off-the-shelf software elements, the application of the cost-to-cost method produces the opposite effect. The book basis of the software tends to be low, because most of the costs associated with software development frequently are charged to expense when incurred in conformity with FASB Statement No. 86. Although the profit margins associated with software are generally higher than those for other elements of the arrangement, the application of cost-to-cost measures with a single profit margin for the entire arrangement would attribute little or no profit to the off-the-shelf software. Similarly, the application of the cost-to-cost method to arrangements that include core software, which also has a relatively low cost basis, would attribute a disproportionately small amount of profit to the software.

Effective Date and Transition

.143 AcSEC concluded that the provisions of this SOP should be applied prospectively and that retroactive application should be prohibited. AcSEC recognizes the benefits of comparable financial statements but is concerned that the application of the provisions of this SOP to contracts existing in prior periods would require a significant amount of judgment. The application of that judgment likely would be impacted by the hindsight a company would have, resulting in judgments based on information that did not exist at the time of the initial judgment but that would be called for if the SOP were to be applied retroactively.

.144 Additionally, AcSEC concluded that some entities would be required to incur large expenditures in determining restated amounts or the cumulative effect of adoption. AcSEC concluded that the cost of calculating such amounts likely would exceed the related benefit of that information. This SOP does not preclude an entity from disclosing in the notes to the financial statements the effect of initially applying this SOP if an entity believes it is practicable to do so.

Items Not Retained From SOP 91-1

.145 AcSEC believes that the guidance included in SOP 91-1 related to discounting receivables and the collectibility of receivables (discussed in paragraphs 56 and 78, respectively, of SOP 91-1) is not specific to the software industry and thus does not need to be retained in this SOP.

Notes to ACC Section 10,700 (SOP 97-2) Software Revenue Recognition

Note 1

[1] Terms defined in the glossary are set in **boldface** type the first time they appear in this SOP.

Note 2

[2] Indicators of whether software is incidental to a product as a whole include (but are not limited to) (*a*) whether the software is a significant focus of the marketing effort or is sold separately, (*b*) whether the vendor is providing postcontract customer support, and (*c*) whether the vendor incurs significant costs that are within the scope of FASB Statement No. 86, Accounting for the Costs of Computer Software to Be Sold, Leased, or Otherwise Marketed. An example of the applicability of this SOP to revenue earned on products containing software is included in appendix A [paragraph .146].

Note 3

[3] As discussed in paragraph .09, arrangements may include multiple elements. If the discount or other concessions in an arrangement are more than insignificant, a presumption is created that an additional element(s) (as defined in paragraph .09) is being offered in the arrangement.

Note 4

[4] If a software arrangement includes services that meet the criteria discussed in paragraph .65 of this SOP, those services should be accounted for separately.

Note 5

5 The term *probable* is used in this SOP with the same definition as used in FASB Statement No. 5, *Accounting for Contingencies*.

Note 6

[6] This does not apply to changes in the estimated percentage of customers not expected to exercise an upgrade right. See paragraph .37.

Note 7

[7] Contractual arrangements under which the reseller is obligated to pay only as and if sales are made to users should be accounted for as consignments.

Note 8

[8] The evaluation of whether the level of uncertainty of possible cancellation is remote should be consistent with FASB Statement No. 5, which defines *remote* as relating to conditions in which "the chance of the future event or events occurring is slight."

Exhibit B

SCHEDULE 14A INFORMATION

Proxy Statement Pursuant to Section 14(a) of
the Securities Exchange Act of 1934 (Amendment No.)

Filed by the Registrant /X/

Filed by a Party other than the Registrant / /

Check the appropriate box:
/ / Preliminary Proxy Statement
/ / CONFIDENTIAL, FOR USE OF THE COMMISSION ONLY (AS PERMITTED BY RULE 14A-6(CASE,E)(2))
/X/ Definitive Proxy Statement
/ / Definitive Additional Materials
/ / Soliciting Material Pursuant to Section240.14a-12

SONUS NETWORKS, INC.

(Name of Registrant as Specified In Its Charter)

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

/X/ No fee required.
/ / Fee computed on table below per Exchange Act Rules 14a-6(i)(4) and 0-11.
(1) Title of each class of securities to which transaction applies:

---

(2) Aggregate number of securities to which transaction applies:

---

(3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):

---

(4) Proposed maximum aggregate value of transaction:

---

(5) Total fee paid:

/ / Fee paid previously with preliminary materials.

/ / Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

(1) Amount Previously Paid:
---

(2) Form, Schedule or Registration Statement No.:
---

(3) Filing Party:
---

(4) Date Filed:

[LOGO]

SONUS NETWORKS, INC.
5 CARLISLE ROAD
WESTFORD, MA 01886

March 29, 2002

Dear Shareholder:

We cordially invite you to attend Sonus' annual shareholders meeting. The meeting will be held on Thursday, May 2, 2002, at 9:00 a.m., local time at The Westford Regency, 219 Littleton Road in Westford, Massachusetts.

The Notice of Annual Meeting and Proxy Statement accompanying this letter describes the business to be acted upon at the meeting. Our Annual Report for 2001 is also enclosed. To ensure that your shares are represented at the meeting, you are urged to vote as described in the accompanying notice.

Thank you for your support of Sonus.
Sincerely,

[/S/ RUBIN GRUBER]
Rubin Gruber
Chairman of the Board of Directors

[/S/ HASSAN AHMED]
Hassan M. Ahmed
President and Chief Executive Officer

THE NOTICE OF MEETING AND PROXY STATEMENT AND ACCOMPANYING PROXY CARD ARE BEING DISTRIBUTED ON OR ABOUT MARCH 29, 2002.

[LOGO]

SONUS NETWORKS, INC.
5 CARLISLE ROAD
WESTFORD, MA 01886

NOTICE OF ANNUAL MEETING OF SHAREHOLDERS
TO BE HELD MAY 2, 2002

To the Shareholders of Sonus Networks, Inc.:

The 2002 Annual Meeting of Shareholders of Sonus Networks, Inc., will be held on Thursday, May 2, 2002 at 9:00 a.m., local time, at The Westford Regency, 219 Littleton Road, Westford, Massachusetts 01886. At the meeting we will:

1. Elect two (2) directors to each serve for three-year terms; and

2. Transact any other business that may properly come before the meeting or any adjournments thereof.

Shareholders who owned shares of Sonus common stock of record at the close of business on March 22, 2002 are entitled to attend and vote at the meeting. If you cannot attend, you may vote by telephone or by using the Internet as instructed on the enclosed Proxy Card or by mailing the Proxy Card in the enclosed postage-paid envelope. Any shareholder attending the meeting may vote in person, even if you have already voted on the proposal described in this proxy statement. A complete list of Sonus' shareholders will be available at the corporate offices at 5 Carlisle Road, Westford, Massachusetts 01886 prior to the meeting.

By Order of the Board of Directors,

/s/ Michael G. Hluchyj
Secretary

Westford, Massachusetts
March 29, 2002

A COPY OF YOUR PROXY CARD AND PICTURE IDENTIFICATION WILL BE REQUIRED TO ENTER THE MEETING. CAMERAS AND RECORDING EQUIPMENT WILL NOT BE PERMITTED AT THE MEETING.

WHETHER OR NOT YOU PLAN TO ATTEND THE ANNUAL MEETING, PLEASE COMPLETE, DATE AND SIGN THE ENCLOSED PROXY CARD AND MAIL IT PROMPTLY IN THE ENCLOSED STAMPED ENVELOPE OR VOTE ELECTRONICALLY VIA THE INTERNET OR VOTE BY TELEPHONE IN ORDER TO ASSURE REPRESENTATION OF YOUR SHARES AT THE ANNUAL MEETING. NO POSTAGE NEED BE AFFIXED IF MAILED IN THE UNITED STATES.

SONUS NETWORKS, INC.
PROXY STATEMENT

INFORMATION CONCERNING SOLICITATION AND VOTING

Our Board of Directors is soliciting proxies for the 2002 Annual Meeting of Shareholders. This Proxy Statement contains important information for you to consider when deciding how to vote on the matters brought before the meeting. Please read it carefully.

Voting materials, which include this Proxy Statement, a Proxy Card and our 2001 Annual Report to Shareholders, were mailed to shareholders on or about March 29, 2002. Our principal executive offices are located at 5 Carlisle Road, Westford, Massachusetts 01886. Our telephone number is (978) 692-8999.

QUESTIONS AND ANSWERS

Q: Who may vote at the meeting?

A: The Board set March 22, 2002 as the record date for the meeting. All shareholders who owned Sonus common stock of record at the close of business on March 22, 2002 may attend and vote at the meeting. Each shareholder is entitled to one vote for each share of common stock held on all matters to be voted on. On March 22, 2002, 204,675,407 shares of Sonus common stock were outstanding.

Q. How many votes does Sonus need to be present at the meeting?

A: A majority of Sonus' outstanding shares of common stock as of the record date must be present at the meeting in order to hold the meeting and conduct business. This is called a quorum. Shares are counted as present at the meeting if you:

- are present and vote in person at the meeting; or

- have properly submitted a Proxy Card or voted by telephone or by using the Internet.

Q: What proposal will be voted on at the meeting?

A: There is one proposal scheduled to be voted on at the meeting:

- Election of two (2) directors to each serve for three-year terms.

Q: What is the voting requirement to approve the proposal?

A: In Proposal One for the election of the directors, those two nominees who receive the highest number of affirmative "FOR" votes of the shares present or represented and entitled to vote at the annual meeting will be elected.

Q: How are the votes counted?

A: In the election of directors, you may vote "FOR" all of the nominees or your vote may be "WITHHELD" with respect to one or more of the nominees. If you just sign your Proxy Card with no further instructions, your shares will be counted as a vote "FOR" each director. If you do not vote and you hold your shares in a brokerage account in your broker's name (this is called "street name"), your broker will have discretionary authority to vote your shares "FOR" each director or to withhold votes for each or every director. These shares will be counted for the purpose of establishing a quorum for the meeting. Voting results will be tabulated and certified by our transfer agent, American Stock Transfer & Trust Company.

Q: How may I vote my shares in person at the meeting?

A: Shares held directly in your name as the shareholder of record may be voted in person at the meeting. If you choose to attend the meeting, please bring the enclosed Proxy Card and proof of identification for entrance to the meeting. If you hold your shares in street name, you must request a legal proxy from your stockbroker in order to vote at the meeting.

Q: How can I vote my shares without attending the meeting?

A: Whether you hold shares directly as a shareholder of record or beneficially in street name, you may vote without attending the meeting. You may vote by granting a proxy, or for shares held in street name, by submitting voting instructions to your stockbroker or nominee. In most cases, you will be able to do this by telephone, using the Internet or by mail. Please refer to the summary instructions included on your Proxy Card. For shares held in street name, the voting instruction card will be included by your stockbroker or nominee.

BY TELEPHONE OR THE INTERNET--If you have telephone or Internet access, you

may submit your proxy from anywhere in the world by following the instructions on the Proxy Card.

BY MAIL--You may submit your proxy by mail by signing your Proxy Card or, for shares held in street name, by following the voting instruction card included by your stockbroker or nominee and mailing it in the enclosed, postage-paid envelope. If you provide specific voting instructions, your shares will be voted as you have instructed.

Q: How can I change my vote after I return my Proxy Card?

A: You may revoke your proxy and change your vote at any time before the final vote at the meeting. You may do this by signing and submitting a new Proxy Card with a later date, voting by telephone or using the Internet as instructed above (your latest telephone or Internet proxy is counted) or by attending the meeting and voting in person. Attending the meeting will not revoke your proxy unless you specifically request it.

Q: What is Sonus' voting recommendation?

A: Our Board of Directors recommends that you vote your shares "FOR" each of the nominees to the Board.

Q: Where can I find the voting results of the meeting?

A: The preliminary voting results will be announced at the meeting. The final results will be published in our quarterly report on Form 10-Q for the second quarter of fiscal 2002.

PROPOSAL ONE
ELECTION OF DIRECTORS

Sonus' Board of Directors consists of five members and is divided into three classes of directors serving staggered three-year terms. Directors for each class are elected at the annual meeting of shareholders held in the year in which the term for their class expires. The term for two directors, Hassan M. Ahmed and Paul J. Severino, will expire at this 2002 Annual Meeting. Each nominee is presently a director of Sonus. Messrs. Ahmed and Severino, if elected, will each serve a three-year term until Sonus' annual meeting in 2005 or until their respective successors are elected and qualified. Each of the nominees has consented to serve a new three-year term. There are no family relationships among our executive officers and directors.

VOTE REQUIRED

The two persons receiving the highest number of votes represented by outstanding shares of common stock present or represented by proxy and entitled to vote will be elected.

THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS A VOTE "FOR" THE ELECTION TO THE BOARD OF DIRECTORS OF EACH OF THE FOLLOWING NOMINEES.

NOMINEES FOR A THREE-YEAR TERM EXPIRING IN 2005.

HASSAN M. AHMED has been our President and Chief Executive Officer and a member of our Board of Directors since November 1998. From July 1998 to November 1998, Mr. Ahmed was Executive Vice President and General Manager of the Core Switching Division of Ascend Communications, Inc., a provider of wide area

network switches and access data networking equipment, and from July 1997 until July 1998 was a Vice President and General Manager of the Core Switching Division. From June 1995 to July 1997, Mr. Ahmed was Chief Technology Officer and Vice President of Engineering for Cascade Communications Corp., a provider of wide area network switches. From 1993 until June 1995, Mr. Ahmed was a founder and President of WaveAccess, Inc., a supplier of wireless communications. Prior to that, he was an Associate Professor at Boston University, Engineering Manager at Analog Devices, a chip manufacturer, and director of VSLI Systems at Motorola Codex, a supplier of communications equipment. Mr. Ahmed holds a B.S. and M.S. in engineering from Carleton University and a Ph.D. in engineering from Stanford University.

PAUL J. SEVERINO has been a Director since March 1999. Mr. Severino is a private investor. From 1994 to October 1996, he was Chairman of Bay Networks, Inc. after its formation from the merger of Wellfleet Communications, Inc. and Synoptics Communications, Inc. Prior to that, he was a founder, President and Chief Executive Officer of Wellfleet Communications, Inc. He also serves on the Board of Directors of MCK Communications, Inc., Media 100, Inc., and Silverstream Software, Inc. Mr. Severino has a B.S. in engineering from Rensselaer Polytechnic Institute.

DIRECTOR WHOSE TERM WILL EXPIRE IN 2003.

EDWARD T. ANDERSON has been a Director since November 1997. Mr. Anderson has been managing general partner of North Bridge Venture Partners, a venture capital firm, since 1994. Previously, he was a general partner of ABS Ventures, the venture capital affiliate of Alex Brown & Sons. He has an M.F.A. from the University of Denver and an M.B.A. from Columbia University.

DIRECTORS WHOSE TERM WILL EXPIRE IN 2004.

PAUL J. FERRI has been a Director since November 1997. Mr. Ferri has been a general partner of Matrix Partners, a venture capital firm, since 1982. He also serves on the Board of Directors of Sycamore Networks, Inc. Mr. Ferri has a B.S. in engineering from Cornell University, an M.S. in engineering from Polytechnic Institute of New York and an M.B.A. from Columbia University.

RUBIN GRUBER is one of our founders and has been a Director since November 1997 and Chairman of our Board of Directors since November 1998. From November 1997 until November 1998, Mr. Gruber was our President. Before founding Sonus, Mr. Gruber was a founder of VideoServer, Inc., now Ezenia!, Inc., a manufacturer of videoconference network equipment, and from February 1992 until September 1996 served as Vice President of Business Development. Previously, Mr. Gruber was a founder and served as President of both Cambridge Telecommunications, Inc., a manufacturer of networking equipment, and Davox Corporation, a developer of terminals supporting voice and data applications, and served as a Senior Vice President of Bolt, Beranek and Newman Communications Corporation, a subsidiary of Bolt, Beranek and Newman, Inc., a manufacturer of data communications equipment. Mr. Gruber also serves on the Board of Directors of the International Softswitch Consortium. Mr. Gruber holds a B.Sc. in mathematics from McGill University and an M.A. in mathematics from Wayne State University.

BOARD OF DIRECTORS AND COMMITTEES

The Board of Directors held five regular meetings during 2001. Each director attended at least 75% of all board and applicable committee meetings during 2001. The Board of Directors has two standing committees, the Audit Committee

and the Compensation Committee. Each of these committees is composed entirely of non-employee directors. The Board of Directors does not have a nominating committee or a committee serving a similar function; instead the Board of Directors acts as a whole on such matters.

The Compensation Committee, which consists of Messrs. Ferri and Severino, establishes and monitors policies governing the compensation of executive officers. The Committee reviews the performance and determines salaries and incentive compensation for executive officers, and makes restricted stock or option awards to those individuals. In addition, the Committee administers stock plans and other incentive and benefit plans of Sonus. There was one meeting of the Compensation Committee during 2001, and the Committee acted periodically by written consent during the year.

The Audit Committee, which consists of Messrs. Anderson, Ferri and Severino, reviews the professional services provided by our independent auditors, the independence of our auditors from our management, our annual financial statements and our system of internal accounting controls. The Audit Committee also reviews other matters with respect to our accounting, auditing and financial reporting practices and procedures as it may find appropriate or may be brought to its attention. The members of the Audit Committee are all independent, as defined in the National Association of Securities Dealers' listing standards. There were five meetings of the Audit Committee during 2001. For additional information concerning the Audit Committee, please see the section captioned "Audit Committee Report."

DIRECTOR COMPENSATION

We do not currently compensate our directors in cash for their service as members of the Board of Directors, although they may be reimbursed for reasonable out-of pocket expenses incurred in connection with attendance at Board of Director or committee meetings. Under our Amended and Restated 1997 Stock Incentive Plan (the "Plan"), directors are eligible to receive stock option grants or restricted stock awards at the discretion of the Board of Directors or other administrator of the Plan. Please see the section captioned "Certain Transactions" for information about option grants to our directors in 2001.

EXECUTIVE COMPENSATION AND RELATED INFORMATION

COMPENSATION COMMITTEE REPORT ON EXECUTIVE COMPENSATION

The Compensation Committee establishes and monitors policies governing the compensation of executive officers. The Committee reviews the performance and determines salaries and incentive compensation for executive officers, and makes restricted stock or option awards to those individuals.

COMPENSATION PHILOSOPHY. Compensation policies for Sonus' executive officers are designed to offer compensation opportunities that attract highly talented executives, motivate individuals to perform at their highest levels, reward outstanding initiative and achievement, and retain those individuals with the leadership abilities and skills necessary to build long-term shareholder value. Sonus' executive compensation program has three major components: (i) base salary, (ii) cash-based incentives, and (iii) equity-based incentives.

BASE SALARY. At the beginning of fiscal 2001, base salaries for executive officers were increased to begin to align them with salaries for similar positions at comparable companies in our industry. However, base salaries

generally remain below the level of comparable companies, consistent with the Committee's objective to attract, retain and motivate executive officers primarily through long-term, equity-based incentives. The Committee intends to continue to adjust compensation appropriately in order to attract and retain superior executive talent.

CASH-BASED INCENTIVES. Sonus made a discretionary bonus award to the chief executive officer in 2001 based upon his performance. The Committee believes that a significant portion of each executive officer's compensation should be tied to the achievement by Sonus of its financial goals and by each executive officer of his or her individual objectives. Accordingly, cash-based incentives are expected to represent an increasingly substantive part of total compensation for Sonus' executives.

EQUITY-BASED INCENTIVES. The Committee strongly believes in awarding stock options and restricted stock to Sonus' executive officers to tie executive officer compensation directly to the long-term success of Sonus and increases in shareholder value. In determining the size of the stock option grants awarded to each executive officer, the Committee takes into account the executive officer's position with Sonus, the executive officer's past performance, the executive's anticipated contribution to meeting Sonus' long-term goals, and industry practices and norms. Long-term incentives granted in prior years and existing levels of stock ownership are also taken into consideration.

During fiscal 2001, the Committee granted stock options to the executive officers at an exercise price equal to the fair market value on the date of grant. The options vest over a four-year period, subject to certain acceleration of vesting upon a change in control of Sonus.

CHIEF EXECUTIVE OFFICER COMPENSATION. The Chief Executive Officer's compensation generally is based on the same policies and criteria as the other executive officers. In fiscal 2001, Mr. Ahmed's base salary was increased, but remains well below the level of many comparable companies. During 2001, Mr. Ahmed received a cash bonus for his performance in fiscal 2001, and a stock option award. The Compensation Committee expects to adjust Mr. Ahmed's salary and cash-based incentives in the future based upon comparative compensation of chief executive officers of companies of similar magnitude, complexity and scope of responsibility, and other factors, which may include the financial performance of Sonus and Mr. Ahmed's success in meeting strategic goals.

POLICY ON DEDUCTIBILITY OF EXECUTIVE COMPENSATION. The Committee does not believe Section 162(m) of the Internal Revenue Code of 1986, as amended, which disallows a tax deduction for certain compensation in excess of $1 million, will likely have an effect on Sonus in the near future. The Committee believes that stock options granted under Sonus' 1997 Stock Incentive Plan meet the exception for qualified performance-based compensation in accordance with Internal Revenue Code

Regulations, so that amounts otherwise deductible with respect to these options will not count toward the $1 million deduction limit. The Committee's general policy is to take into account the deductibility of compensation in determining the type and amount of compensation payable to executive officers.

Submitted by,
COMPENSATION COMMITTEE:
Paul J. Ferri
Paul J. Severino

COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION

No interlocking relationship exists between any member of our Board of Directors or our Compensation Committee and any member of the Board of Directors or Compensation Committee of any other company, and none of these interlocking relationships have existed in the past. In May 2001, we granted options to purchase 10,000 shares of common stock to each of Messrs. Ferri and Severino at an exercise price of $29.00 per share under the Plan.

AUDIT COMMITTEE REPORT

The Audit Committee reviews the financial reporting process, the system of internal controls and the audit process. The Audit Committee operates pursuant to a written charter which has been approved by the Board of Directors, a copy of which was filed as an exhibit to Sonus' definitive proxy statement for the 2001 Annual Meeting of Shareholders, which was filed with the Securities and Exchange Commission on April 20, 2001.

Management is responsible for the preparation, presentation and integrity of Sonus' consolidated financial statements, the selection of appropriate accounting and financial reporting principles, and for the maintenance of internal controls and procedures designed to assure compliance with accounting standards and applicable laws and regulations. The independent auditors, Arthur Andersen LLP are responsible for performing an independent audit of the consolidated financial statements in accordance with generally accepted auditing standards. The Audit Committee periodically meets with the independent auditors, with and without management present, to discuss the results of their examinations, their evaluations of Sonus' internal controls and the overall quality of Sonus' financial reporting.

The Audit Committee has reviewed and discussed Sonus' audited consolidated financial statements with management and the independent auditors. The Audit Committee has also discussed with Arthur Andersen LLP the matters required to be discussed by Statement of Auditing Standards No. 61, COMMUNICATION WITH AUDIT COMMITTEES. The Audit Committee has discussed with Arthur Andersen LLP the auditors' independence from Sonus and its management and has received from Arthur Andersen LLP the written disclosures and the letter required by Independence Standards Board Standard No. 1, INDEPENDENCE DISCUSSIONS WITH AUDIT COMMITTEES. The Committee also considered whether the non-audit services performed by Arthur Andersen LLP are compatible with maintaining the auditors' independence.

Based on the review and discussions noted above, the Audit Committee recommended to the Board of Directors, and the Board has approved, the inclusion of the audited consolidated financial statements in Sonus' Annual Report on Form 10-K for the year ended December 31, 2001, for filing with the Securities and Exchange Commission.

Submitted by,
AUDIT COMMITTEE:
Edward T. Anderson
Paul J. Ferri
Paul J. Severino

FEES BILLED TO SONUS BY ARTHUR ANDERSEN LLP DURING FISCAL YEAR ENDED DECEMBER 31, 2001

AUDIT FEES

For the audit of the consolidated financial statements for the fiscal year ended December 31, 2001 and for the review of the consolidated financial statements included in Sonus' quarterly filings on Form 10-Q, the aggregate fees billed to Sonus by Arthur Andersen LLP totaled $92,000.

ALL OTHER FEES

For non-audit services, which include fees for business acquisitions including our acquisition of telecom technologies, inc., or TTI, tax planning and compliance services, and participation in various filings with the Securities and Exchange Commission, the aggregate fees billed to Sonus by Arthur Andersen LLP totaled $480,000.

FINANCIAL INFORMATION SYSTEM DESIGN AND IMPLEMENTATION FEES

During the year ended December 31, 2001, Arthur Andersen LLP did not provide any services to Sonus relating to financial information systems design and implementation.

APPOINTMENT OF INDEPENDENT AUDITORS

In the prior year, the Audit Committee recommended the appointment of independent auditors to the Board of Directors, which in turn recommended ratification of such appointment by our shareholders. Arthur Andersen LLP has served as our independent auditor since 1998 and is familiar with Sonus' business affairs, financial controls and accounting procedures. However, in light of recent public events surrounding Arthur Andersen LLP, the Audit Committee and management of Sonus are not prepared to request that our shareholders ratify the appointment of independent auditors to audit Sonus' financial statements for fiscal 2002. While we are continuing to work with Arthur Andersen LLP as our independent auditor for the financial statement review for the first quarter of fiscal 2002, the Audit Committee will continue to monitor the situation carefully and gather additional information. The Audit Committee intends to make a decision with respect to the appointment of independent auditors for fiscal 2002 that we believe to be in the best interests of Sonus and its shareholders.

EXECUTIVE OFFICERS AND DIRECTORS

The following table sets forth our executive officers and directors, their respective ages and positions as of January 31, 2002:

NAME	AGE	POSITION
Rubin Gruber..........................	57	Chairman of the Board of Directors
Hassan M. Ahmed......................	44	President, Chief Executive Officer and Director
Terri A. Griffin.....................	40	Vice President of Marketing
Michael G. Hluchyj...................	47	Chief Technology Officer, Vice President and Secretary
Paul R. Jones........................	52	Vice President of Engineering
Jeffrey Mayersohn....................	50	Vice President of Customer Support and Professional Services
Stephen J. Nill......................	50	Chief Financial Officer, Vice President of Finance and Administration and Treasurer
Gary A. Rogers.......................	46	Vice President of Worldwide Sales

Frank T. Winiarski..................	59	Vice President of Manufacturing
Edward T. Anderson (1)..............	52	Director
Paul J. Ferri (1)(2)................	63	Director
Paul J. Severino (1)(2).............	55	Director

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(1) Member of audit committee.

(2) Member of compensation committee.

RUBIN GRUBER--See "PROPOSAL ONE--ELECTION OF DIRECTORS" for Mr. Gruber's background.

HASSAN M. AHMED--See "PROPOSAL ONE--ELECTION OF DIRECTORS" for Mr. Ahmed's background.

TERRI A. GRIFFIN has been our Vice President of Marketing since July 2001. Ms. Griffin was Vice President of Marketing at TTI from November 1998 until June 2001. From November 1996 until November 1998, she was the Director of Marketing at ODS Networks, a leading manufacturer of data networking communications equipment. From September 1990 until October 1996, she was the Director of Marketing at EMASS Inc., a leading developer of automated mixed-media libraries and specialized storage management software. Ms. Griffin holds a B.S. in mathematics from Stephen F. Austin University.

MICHAEL G. HLUCHYJ is one of our founders and has been our Chief Technology Officer and Vice President since November 1997. He also has been our Secretary since our inception, and was our President from August 1997 to November 1997, our Treasurer from inception until March 2000 and a Director from our inception until November 1998. From July 1994 until July 1997, he was Vice President and Chief Technology Officer at Summa Four, Inc., a supplier of switches for carrier networks. Previously, he was Director of Networking Research at Motorola Codex and on the technical staff at AT&T Bell Laboratories. Mr. Hluchyj holds a B.S. in engineering from the University of Massachusetts and an M.S. and a Ph.D. in engineering from the Massachusetts Institute of Technology.

PAUL R. JONES has been our Vice President of Engineering since June 2000. From February 1997 until May 2000, he was Vice President of Engineering for Indus River Networks, Inc., a developer of virtual private network solutions. From December 1994 until February 1996, he was Chief Operating Officer at Isis Distribution Systems, a wholly owned subsidiary of Stratus Computers. From March 1990 until November 1994, he was Vice President of Engineering at Stratus Computers, Inc., a provider of fault tolerant computer systems and services. Previously, Mr. Jones held senior engineering management positions at Stellar Computers, Inc. and Prime Computer, Inc. Mr. Jones holds an A.B. from Brown University and an M.S. in engineering from the University of Massachusetts.

JEFFREY MAYERSOHN has been our Vice President of Customer Support and Professional Services since July 1999. From March 1998 until July 1999, he was our Vice President of Carrier Relations. From June 1997 to March 1998, Mr. Mayersohn was a Senior Vice President at GTE Internetworking, an Internet service provider. From January 1995 to June 1997, he was with BBN Corporation, formerly Bolt, Beranek and Newman, Inc., and was a Vice President at the BBN Planet division, an Internet service provider. From 1978 to January 1995, he held a number of positions at Bolt, Beranek and Newman Communications Corporation, including Senior Vice President of Engineering, Senior Vice

President responsible for U.S. Government Networks and Vice President of Professional Services. Mr. Mayersohn holds an A.B. in physics from Harvard College and an M.Phil. in physics from Yale University.

STEPHEN J. NILL has been our Chief Financial Officer and Vice President of Finance and Administration since September 1999 and our Treasurer since March 2000. From June 1994 until August 1999, he was Vice President of Finance and Chief Financial Officer of VideoServer, Inc., now Ezenia!, Inc. Previously, he served as Corporate Controller and Chief Accounting Officer at Lotus Development Corporation, a software supplier. Prior to that, Mr. Nill held various financial positions with Computervision, Inc., a supplier of workstation-based software, International Business Machines Corporation and Arthur Andersen LLP. Mr. Nill has a B.A. in accounting from New Mexico State University and an M.B.A. from Harvard University.

GARY A. ROGERS has been our Vice President of Worldwide Sales since March 1999. From March 1999 to December 2000, Mr. Rogers was also our Vice President of Marketing. From February 1997 to March 1999, Mr. Rogers was Senior Vice President of Worldwide Sales and Operations at Security Dynamics, Inc., now RSA Security, Inc., a supplier of network security products. Previously, he served at Bay Networks, Inc., as Vice President of International Sales from July 1996 to February 1997 and as Vice President of Europe, Middle East and Africa from 1994 until July 1996. Prior to that, he held sales and marketing positions with International Business Machines Corporation. Mr. Rogers holds a B.S. in mathematics from Dartmouth College and an M.B.A. from the University of Chicago.

FRANK T. WINIARSKI has been our Vice President of Manufacturing since July 1998. From June 1997 until June 1998, he was Vice President of Manufacturing at Net2Net, Inc., a supplier of network analyzers. From June 1992 until June 1997, he was Vice President of Manufacturing at VideoServer, Inc., now Ezenia!, Inc. Previously, Mr. Winiarski was Vice President of Manufacturing at Synernetics, a supplier of local area networks, Vice President of Operations at Ashton-Tate Corporation, a software supplier, and held various positions with Digital Equipment Corporation, a computer equipment manufacturer. Mr. Winiarski holds a B.S. in engineering from the University of Idaho and an M.B.A. from Boston University.

EDWARD T. ANDERSON--See "PROPOSAL ONE--ELECTION OF DIRECTORS" for Mr. Anderson's background.

PAUL J. FERRI--See "PROPOSAL ONE--ELECTION OF DIRECTORS" for Mr. Ferri's background.

PAUL J. SEVERINO--See "PROPOSAL ONE--ELECTION OF DIRECTORS" for Mr. Severino's background.

BENEFICIAL OWNERSHIP

The following table sets forth information regarding beneficial ownership of our common stock as of January 31, 2002 by:

- each person who beneficially owns, to the best of our knowledge, more than 5% of the outstanding shares of our common stock;

- each of our executive officers listed in the Summary Compensation Table on page 12;

- each of our directors; and

- all of our executive officers and directors as a group.

Beneficial ownership is determined in accordance with the rules of the Securities and Exchange Commission, and includes voting and investment power with respect to shares. In computing the number of shares beneficially owned by each person named in the following table and the percentage ownership of that person, shares of common stock that are subject to stock options held by those persons that are currently exercisable or exercisable within 60 days of January 31, 2002 are deemed outstanding. These shares are not, however, deemed outstanding for purposes of computing the percentage ownership of any other person.

Unless otherwise indicated below, to our knowledge, all persons named in the table have sole voting and investment power with respect to their shares of common stock, except to the extent authority is shared by spouses under applicable law. The percentage of common stock outstanding as of January 31, 2002 is based on 204,220,958 shares of common stock outstanding on that date. Unless otherwise indicated, the address of each listed shareholder is care of Sonus Networks, Inc., 5 Carlisle Road, Westford, Massachusetts 01886.

NAME OF BENEFICIAL OWNER	NUMBER OF SHARES BENEFICIALLY OWNED	PERCENTAGE OUTSTANDING
EXECUTIVE OFFICERS AND DIRECTORS:		
Hassan M. Ahmed (1)	8,037,091	3.9%
Michael G. Hluchyj (2)	5,899,810	2.9%
Rubin Gruber (3)	3,631,784	1.8%
Gary A. Rogers (4)	1,557,312	*
Stephen J. Nill (5)	1,301,510	*
Edward T. Anderson (6)	559,280	*
Paul J. Severino (7)	555,572	*
Paul J. Ferri (8)	149,089	*
All executive officers and directors as a group (12 persons) (9)	24,016,258	11.7%
5% OWNERS:		
Putnam Investments, LLC and affiliated entities (10)	12,642,270	6.2%
Fidelity Management & Research Company (11)	10,405,070	5.1%

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* Less than 1% of the outstanding shares of common stock.

(FOOTNOTES ON FOLLOWING PAGE)

(1) Includes 3,366,667 shares that are subject to our right to repurchase at cost if Mr. Ahmed ceases to be employed by us and 331,502 options that are currently exercisable. Includes 1,756,000 shares held by family trusts and by his minor children. Mr. Ahmed disclaims beneficial ownership of the shares held by these trusts and his minor children.

(2) Includes 120,469 shares that are subject to our right to repurchase at cost if Mr. Hluchyj ceases to be employed by us and 361,500 options that are

currently exercisable. Includes an aggregate of 1,537,650 shares held by family trusts and by his minor children. Mr. Hluchyj disclaims beneficial ownership of the shares held by these trusts and his minor children.

(3) Includes 39,579 shares that are subject to our right to repurchase at cost if Mr. Gruber ceases to be employed by us and 406,502 options that are currently exercisable.

(4) Includes 869,375 shares that are subject to our right to repurchase at cost if Mr. Rogers ceases to be employed by us. Includes 807,910 shares held by a family trust and 12,000 shares held in trust for his minor children. Mr. Rogers disclaims beneficial ownership of the shares held by these trusts.

(5) Includes 871,875 shares that are subject to our right to repurchase at cost if Mr. Nill ceases to be employed by us and 54,000 options that are currently exercisable. Includes 340,000 shares held by a family trust, of which Mr. Nill disclaims beneficial ownership.

(6) Composed of 493,696 shares held by Mr. Anderson, 65,584 shares held by family trusts and includes 15,625 shares that are subject to our right to repurchase at cost if Mr. Anderson ceases to serve as one of our directors. Mr. Anderson disclaims beneficial ownership of the shares held by these trusts. The address of Mr. Anderson is in care of North Bridge Ventures L.P., 950 Winter Street, Suite 4600, Waltham, MA 02451.

(7) Includes 15,625 shares that are subject to our right to repurchase at cost if Mr. Severino ceases to serve as one of our directors. Includes 51,000 shares held for the benefit of Mr. Severino's minor child under the Massachusetts Uniform Transfer to Minors Act.

(8) Includes 15,625 shares which are subject to our right to repurchase at cost if Mr. Ferri ceases to serve as one of our directors. The address of Mr. Ferri is in care of Matrix V Management Co., L.L.C., 1000 Winter Street, Suite 4500, Waltham, MA 02451.

(9) Includes 6,059,322 shares that are subject to our right to repurchase at cost if our executive officers cease to be employed by us or our directors cease to serve as directors and 1,447,657 options that are currently exercisable.

(10) According to a Schedule 13G filed on February 15, 2002, Putnam Investments, LLC. ("PI"), a wholly owned subsidiary of Marsh & McLennan Companies, Inc., was the beneficial owner of 12,642,270 shares of common stock, and two wholly owned subsidiaries of PI were the beneficial owners of such shares as follows: (i) Putnam Investment Management, LLC. ("PIM") was the beneficial owner of 11,945,320 shares of common stock in its capacity as investments adviser to the Putnam family of mutual funds; and (ii) The Putnam Advisory Company, LLC. ("PAC") was the beneficial owner of 696,950 shares of common stock in its capacity as investment adviser to Putnam's institutional clients. Both PIM and PAC have dispository power over the shares as investment managers, but the trustees of each mutual fund have voting power over the shares held by each fund, and PAC has shared voting power over the shares held by the institutional clients.

(11) According to a Schedule 13G filed on February 14, 2002, Fidelity Management & Research Company ("Fidelity") a wholly owned subsidiary of FMR Corp., was the beneficial owner of 10,405,070 shares of common stock in its capacity as investment advisor to various registered investment companies (the power to vote such shares resides solely with the boards of

trustee of these Fidelity Funds, while the power to dispose of such shares resides with Edward C. Johnson 3rd, FMR Corp., Fidelity and the Fidelity Funds). Edward C. Johnson 3rd is chairman of FMR Corp., Abigail P. Johnson is a director of FMR Corp. and members of the Johnson family may be deemed to form a controlling group with respect to FMR Corp.

EXECUTIVE COMPENSATION

The following table sets forth, for the years ended December 31, 2001, 2000 and 1999, the compensation earned by the Chairman of our Board of Directors, our Chief Executive Officer, and the other three most highly compensated executive officers who received annual compensation in excess of $100,000.

SUMMARY COMPENSATION TABLE

		ANNUAL COMPENSATION			LONG-TERM COMPENSATION AWARDS	
NAME AND PRINCIPAL POSITION	YEAR	SALARY	BONUS	ALL OTHER COMPENSATION	RESTRICTED STOCK AWARDS(5)	SECURITIES UNDERLYING OPTIONS/SARS
Rubin Gruber	2001	$175,000	$ --	$ --	$ --	320,000
Chairman of the Board of Directors	2000	150,000	--	--	0(6)	888,000
	1999	150,000	--	--	--	--
Hassan M. Ahmed	2001	175,000	75,000	38,000(2)	--	640,000
President and Chief Executive Officer	2000	150,000	75,000	313,000(2)	0(6)	813,000
	1999	150,000	75,000	36,417(2)	--	--
Michael G. Hluchyj	2001	175,000	--	--	--	240,000
Chief Technology Officer, Vice President and Secretary	2000	150,000	--	--	--	723,000
	1999	150,000	--	--	--	--
Stephen J. Nill	2001	175,000	--	--	--	150,000
Chief Financial Officer, Vice President of Finance and Administration and Treasurer	2000	150,000	--	50,000(3)	0(6)	138,000
	1999	43,269(1)	--	--	0(7)	--
Gary A. Rogers	2001	144,940	--	68,762(4)	--	70,000
Vice President of Worldwide Sales	2000	144,940	--	605,832(4)	0(6)	39,000
	1999	111,371(1)	--	99,107(4)	0(7)	--

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(1) Represents the total amount of compensation received in fiscal 1999 for the portion of the year during which the listed individual was one of our executive officers. Messrs. Rogers and Nill joined us in March and September of 1999, respectively.

(2) Represents amounts due in connection with original employment, including in 2000, $275,000 due upon the completion of our initial public offering.

(3) Represents amounts due upon completion of one year of service.

(4) Represents commission income.

(5) On December 31, 2001, the remaining number of shares of restricted common stock held by the above executive officers that had not vested and the value of this stock as of December 31, 2001, was as follows: Mr. Gruber: 136,941 shares, $632,484; Mr. Ahmed: 3,526,999 shares, $16,177,168; Mr. Hluchyj: 240,938 shares, $1,113,099; Mr. Nill: 900,000 shares, $4,098,000; and Mr. Rogers: 904,313 shares, $4,117,636. The value is based on the fair market value of Sonus' common stock on December 31, 2001 of $4.62 per share less the purchase price paid. The holders of these shares of restricted common stock will be entitled to receive any dividends we pay on our common stock.

(FOOTNOTES CONTINUED ON FOLLOWING PAGE)

(6) In March 2000, we sold shares of restricted common stock to the above executive officers as follows: Mr. Gruber: 75,000 shares; Mr. Ahmed: 150,000 shares; Mr. Nill: 30,000 shares; and Mr. Rogers: 150,000 shares. These shares of restricted common stock are subject to our right to repurchase at $3.33 per share, the then current fair market value of the common stock as determined by our Board of Directors. Our repurchase rights generally lapse one year from the date of the purchase. There was no public trading market for the common stock in March 2000. Our Board of Directors determined the fair market value of the common stock based on various factors including the illiquid nature of an investment in our common stock, our historical performance, the preferences, including liquidation and redemption of our outstanding redeemable convertible preferred stock, our future prospects and the prices of our securities sold to third parties in arm's-length transactions.

(7) In April and September of 1999, we sold 1,875,000 and 1,687,500 shares of restricted common stock to Messrs. Rogers and Nill, respectively, subject to our right to repurchase at $0.07 per share, the then-current fair market value of the common stock as determined by our Board of Directors. Our repurchase right lapses as to 20% of the shares one year from the date Messrs. Rogers and Nill each commenced employment and thereafter lapses as to an additional 1.6667% of the shares for each month of employment. There was no public trading market for the common stock in April and September of 1999. Our Board of Directors determined the fair market value of the common stock based on various factors including the illiquid nature of an investment in our common stock, our historical performance, the preferences, including liquidation and redemption of our outstanding redeemable convertible preferred stock, our future prospects and the prices of our securities sold to third parties in arm's-length transactions.

OPTION GRANTS IN LAST FISCAL YEAR

The Option Grant Table below sets forth hypothetical gains or "option spreads" for the options at the end of their respective ten-year terms, as calculated in accordance with the rules of the Securities and Exchange Commission. Each gain is based on an arbitrarily assumed annualized rate of compound appreciation of the market price at the date of grant of 5% and 10% from the date the option was granted to the end of the option term. Actual gains, if any, on option exercises are dependent on the future performance of our common stock and overall market conditions.

NAME	NO. OF SECURITIES UNDERLYING OPTIONS GRANTED(1)	PERCENT OF TOTAL OPTIONS GRANTED TO EMPLOYEES DURING PERIOD(2)	EXERCISE PRICE PER SHARE(3)	EXPIRATION DATE	POTENTIAL REALIZABLE VALUE AT ASSUMED ANNUAL RATES OF STOCK APPRECIATION FOR OPTION TERM(4) 5%	10%
Hassan M. Ahmed..................	640,000	9.9%	$13.88	4/3/2011	$5,584,584	$14,152,433
Rubin Gruber......................	320,000	4.9	13.88	4/3/2011	2,792,292	7,076,217
Michael G. Hluchyj...............	240,000	3.7	13.88	4/3/2011	2,094,219	5,307,162
Stephen J. Nill..................	150,000	2.3	13.88	4/3/2011	1,308,887	3,316,976
Gary A. Rogers...................	70,000	1.1	13.88	4/3/2011	610,814	1,547,922

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(1) Options vest 25% one year from the date of grant and thereafter an additional 2.0833% for each month of employment.

(2) Based on an aggregate of 6,466,196 options granted by Sonus, including those granted to the executive officers named in the Summary Compensation Table during the fiscal year ended December 31, 2001.

(3) Options were granted with an exercise price equal to the fair market value of our common stock.

(FOOTNOTES CONTINUED ON FOLLOWING PAGE)

(4) The potential realizable value is calculated based on (a) the ten-year term of the option at its time of grant; (b) the assumption that the closing price for the common stock on the date of grant appreciates at the indicated annual rate compounded annually for the entire term of the option; and (c) the assumption that the option is exercised and sold on the last day of its term for the appreciated stock price.

FISCAL YEAR END OPTION VALUES

The following table presents the value of unexercised stock options as of December 31, 2001, held by our executive officers listed in the Summary Compensation Table. No options were exercised during fiscal year 2001 by any of these executive officers.

NAME	NUMBER OF SECURITIES UNDERLYING UNEXERCISED OPTIONS AT DECEMBER 31, 2001 EXERCISABLE	UNEXERCISABLE	VALUE OF UNEXERCISED IN-THE-MONEY OPTIONS AT DECEMBER 31, 2001(1) EXERCISABLE	UNEXERCISABLE

Hassan M. Ahmed................................	271,314	1,181,686	$349,092	$696,971
Rubin Gruber..................................	346,314	861,686	445,592	696,971
Michael G. Hluchyj............................	316,314	646,686	406,992	523,271
Stephen J. Nill...............................	43,500	244,500	55,970	121,590
Gary A. Rogers................................	--	109,000	--	50,180

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(1) The value of in-the-money options is based on the closing price of our common stock on December 31, 2001 of $4.62 per share, minus the per share exercise price, multiplied by the number of shares underlying the option.

CERTAIN TRANSACTIONS

In April 2001, we granted options to purchase shares of our common stock to our executive officers under the Plan, each at an exercise price of $13.88 per share, as listed below:

NAME	NUMBER OF OPTIONS GRANTED
Hassan M. Ahmed..	640,000
Rubin Gruber...	320,000
Michael G. Hluchyj...	240,000
Stephen J. Nill..	150,000
Jeffrey Mayersohn..	75,000
Gary A. Rogers...	70,000
Paul R. Jones..	70,000
Frank T. Winiarski...	25,000

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In May 2001, we granted options to purchase shares of our common stock to our non-employee directors, under the Plan, each at an exercise price of $29.00 per share, as listed below:

NAME	NUMBER OF OPTIONS GRANTED
Edward T. Anderson...	10,000
Paul J. Ferri..	10,000
Paul J. Severino...	10,000

In October 2001, we granted an option to purchase 150,000 shares of our common stock to Terri A. Griffin, our Vice President of Marketing, under our Plan, at an exercise price of $2.60 per share.

The options described in the preceding paragraphs vest over a four-year period with 25% of the number of options vesting one year from the date of grant

and monthly thereafter at the rate of 2.0833% for each month of employment or service completed by the executive officer or non-employee director.

AGREEMENTS WITH EXECUTIVE OFFICERS

On November 4, 1998, in connection with the issuance of restricted common stock, we loaned $257,000 to Hassan M. Ahmed, our President and Chief Executive Officer. The loan was secured by 7,710,000 shares of our restricted common stock and bore interest at 8% per year. As of March 31, 2001, the loan has been fully repaid.

We believe that the transaction set forth above was made on terms no less favorable to us than could have been obtained from unaffiliated third parties. All future transactions, including loans between us and our officers, directors, principal shareholders and their affiliates will be approved by a majority of the Board of Directors, including a majority of the independent and disinterested directors on the Board of Directors, and will be on terms no less favorable to us than could be obtained from unaffiliated third parties.

In January 2001, in connection with our acquisition of TTI, we entered into an employment agreement with Anousheh Ansari, formerly the Chairman and Chief Executive Officer of TTI, whereby Ms. Ansari became a Sonus senior executive with the title of Vice President and General Manager of our INtelligentIP Division. In December 2001, Ms. Ansari's employment with Sonus was terminated. Ms. Ansari was paid a lump sum amount equal to her annual salary for the period through December 31, 2002, the term of her original employment agreement. In addition, restrictions associated with 550,000 shares of common stock have been removed and approximately 1,365,000 shares of common stock pledged under her employment agreement have been released.

STOCK PERFORMANCE GRAPH

The following performance graph show the twenty-month cumulative total shareholder return assuming the investment of $100 on May 25, 2000, the date of Sonus' initial public offering, through December 31, 2001 in Sonus common stock, the Nasdaq Composite Index and the Nasdaq Telecommunications Index. The performance shown is not necessarily indicative of future performance.

EDGAR REPRESENTATION OF DATA POINTS USED IN PRINTED GRAPHIC

	SONUS STOCK	NASDAQ COMPOSITE INDEX	NASDAQ TELECOMMUNICATIONS INDEX
May 24, 2000	$100.00	$100.00	$100.00
Jun. 30, 2000	312.63	123.73	123.26
Sep. 29, 2000	250.25	114.58	103.33
Dec. 29, 2000	150.00	77.07	65.61
Mar. 30, 2001	118.54	57.41	46.44
Jun. 29, 2001	138.78	67.40	44.05
Sep. 28, 2001	17.82	46.76	28.75
Dec. 28, 2001	27.45	60.85	33.50

SECTION 16(A) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

To the knowledge of Sonus, based solely on a review of the copies of reports furnished to Sonus, Sonus believes that during the year ended December 31, 2001, its directors, executive officers and greater than 10% shareholders complied with all Section 16(a) filing requirements, with the exception of Ms. Ansari, whose Form 4 for the month of December 2001 was delinquent.

PROPOSALS AND NOMINATIONS BY SHAREHOLDERS

Shareholders who wish to present proposals for inclusion in Sonus' proxy materials for the 2003 Annual Meeting of Shareholders may do so by following the procedures prescribed in Rule 14a-8 under the Securities Exchange Act of 1934 and Sonus' by-laws. To be eligible, shareholder proposals must be received at Sonus' corporate headquarters in Westford, Massachusetts by the Secretary of Sonus on or before November 29, 2002.

OTHER MATTERS

The Board of Directors knows of no other matters to be submitted at the meeting. If any other matters properly come before the meeting, it is the intention of the persons named in the enclosed form of proxy to vote the shares they represent as the Board of Directors may recommend.

Copies of our Annual Report on Form 10-K for the fiscal year ended December 31, 2001 are available without charge to each shareholder, upon written request to the Investor Relations department at our principal executive offices at 5 Carlisle Road, Westford, MA 01886.

We will pay the costs of soliciting proxies from shareholders. Directors, executive officers and regular employees may solicit proxies, either personally or by telephone, on behalf of Sonus, without additional compensation, other than the time expended and telephone charges in making such solicitations.

By Order of the Board of Directors,

/s/ Michael G. Hluchyj
Secretary

Westford, Massachusetts
March 29, 2002

SONUS NETWORKS, INC.

PROXY FOR 2002 ANNUAL MEETING OF SHAREHOLDERS

THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS

The undersigned shareholder of SONUS NETWORKS, INC., a Delaware corporation, hereby acknowledges receipt of the Notice of Annual Meeting of Shareholders and Proxy Statement, each dated March 28, 2002, and hereby appoints Hassan M. Ahmed, Stephen J. Nill and Melinda J. Brown, and each of them, jointly and severally, as proxies and attorneys-in-fact, with full power of substitution, on behalf and in name of the undersigned, to represent the undersigned at the 2002 Annual Meeting of Shareholders of Sonus Networks, Inc. to be held on Thursday, May 2, 2002 at 9:00 a.m., local time, at The Westford Regency, 219 Littleton Road, Westford, Massachusetts and at any adjournment or adjournments thereof, and to

vote all shares of common stock which the undersigned would be entitled to vote, if personally present, on the matters set forth on the reverse side and, in accordance with their discretion, on any other business that may come before the meeting, and revokes all proxies previously given by the undersigned with respect to the shares covered hereby.

THIS PROXY WILL BE VOTED AS DIRECTED, OR IF NO CONTRARY DIRECTION IS INDICATED, WILL BE VOTED FOR THE ELECTION OF DIRECTORS AND AS SAID PROXIES DEEM ADVISABLE ON SUCH OTHER MATTERS AS MAY PROPERLY COME BEFORE THE MEETING.

(IMPORTANT -- PLEASE SIGN AND DATE THIS PROXY ON THE REVERSE SIDE OF THIS CARD)

SONUS NETWORKS, INC.

/X/ PLEASE MARK YOUR VOTE AS IN THIS EXAMPLE.

1. ELECTION OF DIRECTORS. Nominees: (01) Hassan M. Ahmed
(02) Paul J. Severino

FOR ALL NOMINEES (except as marked below)	AGAINST ALL NOMINEES
/ /	/ /

(Instructions: To withhold authority to vote for any indicated nominee, write the number(s) of the Nominee(s) in the box provided to the right.) / /

MARK HERE IF YOU PLAN TO ATTEND THE MEETING / /

MARK HERE FOR ADDRESS CHANGE AND NOTE BELOW / /

Signature -------------------------------- Date ------------------

Signature -------------------------------- Date ------------------

Please sign exactly as your name(s) appear(s) hereon. All holders must sign. If held in joint tenancy, all persons must sign. Trustees, administrators, etc., should include title and authority. Corporations should provide full name of corporation and title of authorized officer signing the proxy.

Exhibit C

Use these links to rapidly review the document
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SONUS NETWORKS, INC. INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

AMENDMENT NO. 1 TO

FORM 10−K/A

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d)
OF THE SECURITIES EXCHANGE ACT OF 1934**

For the year ended December 31, 2003

Commission File Number 000−30229

SONUS NETWORKS, INC.

(Exact name of Registrant as specified in its charter)

Delaware	**04−3387074**
(State or other jurisdiction of incorporation or organization)	(I.R.S. employer identification no.)

250 Apollo Drive, Chelmsford, Massachusetts 01824
(Address of principal executive offices, including zip code)

(978) 614−8100
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:
None

Securities registered pursuant to Section 12(g) of the Act:
Common stock, $0.001 par value

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☐ No ☒

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S−K is not contained herein, and will not be contained, to the best of the Registrant's knowledge, in definitive proxy statement or information proxy statements incorporated by reference in Part III of this Form 10−K or any amendment to this Form 10−K. ☐

Indicate by check mark whether the Registrant is an accelerated filer (as defined in Rule 12b−2 of the Exchange Act). Yes ☒ No ☐

The aggregate market value of the common stock held by non−affiliates of the Registrant was approximately $869,240,000 based on the closing price for the Common Stock on the NASDAQ National Market on June 30, 2003. As of January 31, 2004, there were 245,730,772 shares of $0.001 par value per share, common stock, outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

None.

EXPLANATORY NOTE

This Amendment No. 1 on Form 10−K/A to our Annual Report on Form 10−K for the year ended December 31, 2003, filed with the Securities and Exchange Commission (SEC) on March 15, 2004, is being filed for the purpose of including Items 6, 7, 8 (including our restated consolidated balance sheet, statement of operations, statement of stockholders' equity, statement of cash flows and related disclosures for the year ended December 31, 2002, and our restated consolidated statement of operations, statement of stockholders' equity, statement of cash flows and related disclosures for the year ended December 31, 2001), 9A, 10, 11, 12, 13 and 14 and the principal executive officer and co−principal financial officer certifications pursuant to Section 906 of the Sarbanes−Oxley Act of 2002, and complete certifications by the principal executive officer and co−principal financial officers pursuant to Section 302 of the Sarbanes−Oxley Act of 2002.

This Amendment No. 1 on Form 10−K/A does not reflect events occurring after the filing of the original Annual Report on Form 10−K on March 15, 2004, or modify or update the disclosure presented in the original Annual Report on Form 10−K, except to reflect the revisions as described above.

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This Amendment No. 1 on Form 10−K/A, as well as all other reports filed with or furnished to the SEC, are available free of charge through our Internet site (*http://www.sonusnet.com*) as soon as practicable after we electronically file such material with, or furnish it to, the SEC. The public may read and copy any materials we file with the SEC at the SEC's Public Reference Room at 450 Fifth Street, NW, Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1−800−SEC−0330. The SEC maintains an Internet site (*http://www.sec.gov*) that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

Restatement of Consolidated Financial Statements

As previously reported in our Current Report on Form 8−K filed with the SEC on January 21, 2004, we postponed the release of our financial results for the quarter and year ended December 31, 2003 pending the completion of the audit of our 2003 financial statements. On February 11, 2004, in connection with this year−end audit, we announced that we and our independent auditors had identified certain issues, practices and actions of certain employees relating to both the timing of revenue recognized from certain customer transactions and to certain other financial statement accounts, which might affect our 2003 financial statements and possibly financial statements for prior periods. Additionally, we announced that in response to the issues identified we were performing a detailed review of the revenue timing issues and of certain other financial statement accounts and that the audit committee of our board of directors was conducting an independent investigation with the assistance of independent legal and accounting advisors.

During the course of our review and the audit committee's investigation, we determined that the accounting with respect to certain prior period transactions required adjustment. As a result, we have restated our consolidated financial statements for the years ended December 31, 2002 and 2001 and the nine months ended September 30, 2003. The restated financial statements include a number of adjustments, the largest of which relate to revenue, deferred revenue, inventory reserves, purchase accounting, impairments, accrued expenses and stock−based compensation. Adjustments to revenue result primarily in revenue being deferred and recognized in subsequent periods. Adjustments to inventory and accrued expenses are primarily to increase or decrease reserve levels previously reported. Adjustments to purchase accounting, impairment, and stock−based compensation relate primarily to the timing of expense recognition.

In connection with our restatement, we and Ernst & Young LLP, our independent auditors, identified and reported to our audit committee significant internal control matters that collectively constitute "material weaknesses." Please see "Item 9A. Controls and Procedures" below for a description of these matters, and of certain of the measures that we have implemented during 2004 to date, as well as additional steps we plan to take to strengthen our controls.

We anticipate amending our previously filed quarterly reports on Form 10−Q for each of the first three quarters of 2003 for the purpose of restating our consolidated financial statements for the first three quarters of 2003 and 2002. The restated consolidated financial statements in these amended quarterly reports on Form 10−Q will include significant adjustments. See Note 18 of our consolidated financial statements. We do not anticipate amending our previously filed annual reports on Form 10−K or our quarterly reports on Form 10−Q for any periods prior to 2003. The consolidated financial statements and related consolidated financial information contained in previously filed reports, including for the years ended December 31, 2002 and 2001 and for the quarterly reports during 2002 and the first three quarters of 2003 should no longer be relied upon.

The net effects of all of the restatement adjustments on the statements of operations, and on all the balance sheet accounts, as of the dates and for the periods indicated in the following table, are in thousands, except per share data. The amounts as of and for the years ended December 31, 2002 and

2001 are derived from our audited financial statements, and the amounts as of and for the nine months ended September 30, 2003 are unaudited.

	As of or for the nine months ended ended Sept. 30, 2003	As of or for the year ended Dec. 31, 2002	As of or for the year ended Dec. 31, 2001
Consolidated Statement of Operations Data:			
Increase (decrease) in revenue	$ (19,193)	$ 31,359	$ (44,399)
(Increase) decrease in loss before income taxes	(15,557)	(5,285)	9,813
(Increase) decrease in net loss	(15,655)	(5,371)	9,813
(Increase) decrease in net loss per share	$ (0.07)	$ (0.03)	$ 0.06
Consolidated Balance Sheet Data:			
Increase (decrease) in cash and cash equivalents	$ 8,078	$ 6,971	$ (54)
Increase (decrease) in accounts receivable	2,732	1,666	1,241
Increase (decrease) in inventory	4,089	(327)	11,437
Increase (decrease) in other current assets	1,174	(290)	3,356
Increase (decrease) in goodwill and purchased intangible assets, net	2,643	3,636	15,453
Increase (decrease) in all other assets	379	328	(111)
Increase (decrease) in accounts payable	(728)	(517)	3,641
Increase (decrease) in accrued expenses	(15,453)	(16,890)	(9,225)
Increase (decrease) in accrued restructuring expenses	—	(812)	(17,344)
Deferred Revenue:			
Increase (decrease) in current portion of deferred revenue	38,783	22,493	43,110
Increase (decrease) in long−term deferred revenue	12,344	8,024	3,942
Total increase (decrease) in deferred revenue	$ 51,127	$ 30,517	$ 47,052
Increase (decrease) in current portion of long−term liabilities	$ —	$ —	$ (483)
Increase (decrease) in stockholders' equity	(15,851)	(314)	7,681

Revenue Adjustments

Deferral of product revenue

We have deferred revenues of $36.7 million previously reported in 2001 from a particular customer transaction. The amount of $27.5 million was subsequently recognized in the second quarter of 2002,

while the remainder was allocated to maintenance revenue and recognized over the period the services are provided. This transaction involved a complex multiple element arrangement that requires significant analysis with respect to the facts surrounding the transaction and technical accounting analysis to determine when revenue should be recognized. We previously recognized revenue in 2001 under this contractual arrangement upon delivery and acceptance of certain product and software releases. As a result of a comprehensive review and analysis of this arrangement, and based on the application of complex revenue recognition guidance, we have now determined that there was insufficient support to establish vendor specific objective evidence of fair value (VSOE) with respect to certain undelivered software releases and we have determined the existence of certain previously unidentified specified software releases. As a result, we have deferred product revenues associated with products and software releases shipped to this customer in 2001 until the second quarter of 2002, when all software releases under the arrangement were delivered.

In the fourth quarter of 2002, we amended our arrangement with this customer to include, among other items, certain additional future software releases. We previously recognized revenue from this arrangement in the fourth quarter of 2002 and in each of the first three quarters of 2003 upon delivery of the products and software releases. Upon review and analysis of the arrangement, we have determined that, based on a technical analysis of software revenue recognition rules, that VSOE was not established for certain undelivered software releases. As a result, we have deferred revenues of $16.2 million associated with products and software releases shipped to this customer during the fourth quarter of 2002 and the first three quarters of 2003. We recognized $10.9 million of those revenues in the fourth quarter of 2003 when the final software release specified in the amendment was delivered to the customer, and the remaining amount was deferred and allocated to maintenance services and estimated discounts on future purchases.

Maintenance revenue

A number of our customer transactions involve multiple elements, including the delivery of product and maintenance services as part of a bundled offering. Statement of Position (SOP) 97−2, *Software Revenue Recognition*, requires maintenance revenue to be recognized over the period services are provided. Based on our review and analysis, we identified certain circumstances in which we offered maintenance services at no additional charge or at discounted rates to certain customers but did not separate the fair value for the maintenance from product revenue. This resulted in revenue associated with the value of the undelivered maintenance services not being recognized over the service period. In the restated financial statements, we have recognized maintenance revenue ratably over the period in which the maintenance services were provided based on the deferral of the applicable VSOE of maintenance services. In such cases, we have reclassified maintenance services from product revenue to service revenue for the applicable periods presented. Based on our review and analysis, we also identified certain circumstances in which insufficient value was allocated to maintenance. In such cases, we have reclassified additional amounts from product revenue to service revenue for the applicable periods presented. In connection with the recognition of the deferred product revenue described above in the second quarter of 2002 and the fourth quarter of 2003, a significant portion of the product revenue was allocated to the value of undelivered maintenance services and deferred over the five−year period in which the maintenance services are provided.

Delivery

We identified transactions where we delivered some, but not all, of the product required under an arrangement. Previously, we deferred a portion of the revenue for these undelivered products based on the pricing in the arrangement, and recognized the remaining revenue on the delivered products. On a restated basis, we have deferred all revenue until all elements of the transaction were delivered because

we were not able to establish VSOE for the undelivered product or, in some instances, because such undelivered product was essential to the functionality of the delivered product.

Customer acceptance

We identified certain circumstances where revenue was recognized in a period other than one in which acceptance was achieved or other contingencies were resolved. As restated, revenue from such arrangements is recorded in the period in which customer acceptance occurred or other contingencies were resolved.

Other

In addition to the above, we identified several errors affecting revenue. We identified one instance in which we provided equipment to satisfy a contractual requirement, for which we have reclassified $274,000 from cost of revenues to reduction of revenue in 2001. We identified another transaction in which a customer provided us with equipment valued at $511,000 as part of a contractual renegotiation. We previously did not record this component of the transaction and, on a restated basis, have increased our fixed assets and revenue by $386,000 in 2002 and by $125,000 in 2003.

Summary

The following table is a reconciliation of revenue as previously reported to amounts as restated for the periods indicated, in thousands:

	Nine months ended Sept. 30, 2003	Year ended Dec. 31, 2002	Year ended Dec. 31, 2001
Revenues, as previously reported	$ 66,019	$ 62,558	$ 173,199
Revenue Restatement Adjustments:			
Deferral of product revenue	(15,452)	34,644	(35,389)
Maintenance revenue	(2,816)	(10,910)	(3,656)
Delivery	(332)	3,898	(3,920)
Customer acceptance	(754)	2,285	(2,275)
Other	161	1,442	841
Total Revenue Restatement Adjustments	(19,193)	31,359	(44,399)
Revenues, as restated	$ 46,826	$ 93,917	$ 128,800

Expense Adjustments

Accrued expenses

During our review and analysis, we identified several accrued expense accounts that required adjustment to be in accordance with Statement of Financial Accounting Standards (SFAS) No. 5, *Accounting for Contingencies*. Accounting for accrued expenses requires estimates and judgments, which can be complex. We adjusted accrual balances as the result of: (1) using more appropriate business assumptions to estimate certain liabilities, such as warranty reserves and post−shipment obligations to customers; (2) in those instances lacking available foundation or support for recorded balances at the time the original accrual was established, using currently known information, including actual disbursements and contemporaneous documentation in order to record the appropriate balances, such as royalties and professional fees; and (3) appropriately classifying certain balance sheet items, such as customer deposits to deferred revenues.

The following table is a reconciliation of accrued expense adjustments by category as of the dates indicated, in thousands:

	Sept. 30, 2003	Dec. 31, 2002	Dec. 31, 2001
Accrued expense adjustments—increase/(decrease) for:			
Employee compensation and related costs	$ (991)	$ 208	$ 1,217
Professional fees	(1,080)	(1,239)	(1,544)
Royalties	1,163	1,492	(1,360)
Warranty reserve	(3,109)	(3,385)	(2,378)
Post−shipment obligations to customers	(2,527)	(2,527)	(2,800)
Customer deposits	(6,576)	(7,240)	—
Other	(2,333)	(4,199)	(2,360)
Total accrued expense adjustments	$ (15,453)	$ (16,890)	$ (9,225)

Restructuring expense and benefits

In connection with our review and analysis, we determined that a restructuring benefit of $16,557,000 for a lease renegotiation originally recorded in 2002 should have been recorded in 2001. In addition, we reduced 2001 restructuring expense and related accruals by $1,929,000 related to balances that lacked support and increased 2002 expenses by $1,306,000. The effect of these adjustments was to reduce restructuring expense from $25,807,000 to $7,321,000 in 2001, and to adjust the restructuring item from a benefit of $10,125,000 to an expense of $7,739,000 in 2002.

Valuation of Intangibles

During 2001, we acquired two companies, telecom technologies, inc. (TTI) and Linguateq, Inc. (Linguateq). We accounted for the TTI acquisition as a purchase in accordance with Accounting Principles Board (APB) No. 16, *Business Combinations*, and for Linguateq as a purchase in accordance with SFAS No. 141, *Business Combinations*. As part of our re−examination of these acquisitions, we hired an independent third−party appraiser. In connection with the TTI acquisition re−appraisal, we have re−examained the total consideration paid, net liabilities assumed, and certain assumptions and calculations supporting the original appraisal of the identified intangible assets acquired from TTI. These assumptions included the customer turnover rate, the gross and operating margin percentages and inconsistencies in the profit assumptions used to value in−process research and development (IPR&D) compared to other identified intangible assets. The results of these changes to the purchase price and related allocation for the TTI acquisition are as follows:

Purchase Price of TTI	As Reported	Adjustments	As Restated
		(in thousands)	
Fair market value of shares issued	$ 527,613	$ (612)	$ 527,001
Liabilities assumed	21,184	(1,375)	19,809
Acquisition expenses	5,833	(67)	5,766
Total	$ 554,630	$ (2,054)	$ 552,576

As a result of re−appraisal of assets acquired, the final purchase price has been allocated to the tangible and intangible assets acquired based upon their fair values as follows:

Purchase Price Allocation of TTI	As Reported	Adjustments	As Restated
		(in thousands)	
Tangible assets	$ 8,296	$ 1,096	$ 9,392
Intangible assets:			
Workforce	3,000	3,900	6,900
Developed technology	11,900	2,100	14,000
Customer relationships	17,400	6,800	24,200
In−process research and development	40,000	800	40,800
Deferred compensation related to unvested stock options	22,600	—	22,600
Goodwill	451,434	(16,750)	434,684
Total	$ 554,630	$ (2,054)	$ 552,576

In connection with the revised appraisals, we have determined that the useful life of the TTI customer relationships and goodwill should be five years, compared to three years as previously reported. The impact to amortization expense as a result of the change in estimated useful lives and valuation of intangibles was an increase of $993,000 and $2,715,000 for the nine months ended September 30, 2003 and for the year ended December 31, 2002 and a decrease of $37,208,000 for the year ended December 31, 2001.

Impairment

In 2001, in light of negative industry and economic conditions, a general decline in technology valuations, and our decision to discontinue the development and use of certain acquired technology, we performed an assessment of the carrying value of goodwill and purchased intangible assets from TTI recorded in connection with SFAS No. 121, *Accounting for the Impairment of Long−lived Assets and Assets to be Disposed of,* and originally recorded an impairment charge of $374,735,000. Due to the changes in the valuation of intangible assets and their useful lives described above and the use of more appropriate revenue projections supporting the impairment calculation performed under SFAS No. 121 in 2001, we performed a new impairment assessment with the assistance of a new third−party appraiser, which resulted in the following impairment charge (after the reallocation of goodwill to the purchased intangibles):

SFAS No. 121 Impairment of Assets Acquired from TTI
As Reported (in thousands)

	Impairment Charge for the year ended December 31, 2001	Remaining Value as of December 31, 2001
Customer relationships	$ 200,217	$ 2,308
Developed technology	138,715	—
Workforce	34,084	797
Fixed assets	1,719	—
Total	$ 374,735	$ 3,105

SFAS No. 121 Impairment of Assets Acquired from TTI
As Restated (in thousands)

	Impairment Charge for the year ended December 31, 2001	Remaining Value as of December 31, 2001
Customer relationships	$ 204,016	$ 16,350
Developed technology	126,821	—
Workforce	59,831	2,381
Fixed assets	1,719	—
Total	$ 392,387	$ 18,731

In 2002, we adopted SFAS No. 141, which resulted in a reclassification of all remaining workforce−related intangible assets into goodwill. As a result of the continuing and significant decline in the market for telecommunications equipment and pursuant to SFAS No. 144, *Accounting for the Impairment or Disposal of Long−lived Assets*, we performed an impairment analysis of certain technology acquired from Linguateq. In addition, we performed an impairment analysis on our remaining goodwill for both the TTI and Linguateq acquisitions pursuant to SFAS No. 142, *Goodwill and Other Intangible Assets*. The results of these analyses are summarized in the following table, in thousands:

	Year Ended December 31, 2002		
	Impairment charge, as reported	Adjustments	Impairment charge, as restated
TTI customer relationships	$ —	$ 7,669	$ 7,669
TTI goodwill	796	1,585	2,381
Linguateq developed technology and customer relationship	175	—	175
Linguateq goodwill	877	(152)	725
Total	$ 1,848	$ 9,102	$ 10,950

Stock−based Compensation

We identified items in the calculation of stock−based compensation and related items that required adjustments to the stockholders' equity section of our balance sheet, and our stock−based compensation expense. These items pertain to errors involving the amortization and recapture of deferred compensation, the 2002 exchange of outstanding employee stock options, and intrinsic value charges for restricted stock and stock options grants and modifications.

We previously adopted the accelerated method of amortizing all deferred compensation defined under Financial Accounting Standards Board (FASB) Financial Interpretation No. (FIN) 28, *Accounting for Stock Appreciation Rights and Other Variable Stock Option or Award Plans*. In the event of forfeiture of a stock−based award, FIN 44, *Accounting for Certain Transactions involving Stock Compensation, an interpretation of APB Opinion No. 25*, requires that compensation expense be adjusted to recapture the compensation expense previously recorded related to unvested stock−based awards, in the period of forfeiture. We previously had not recorded recapture of any such excess compensation expense upon the forfeiture of a stock−based award upon employee termination. As a result, we have decreased stock−based compensation by $229,000 for the nine months ended September 30, 2003, $4,926,000 in 2002 and $3,179,000 in 2001, in these restated financial statements, which includes the recapture of excess compensation expense related to the items discussed in the following two paragraphs.

We also determined that option grants made to certain newly hired employees had intrinsic value on the start date of the new employee. Accounting Principles Board (APB) Opinion No. 25, *Accounting for Stock Issued to Employees,* requires that such intrinsic value be recorded as deferred stock−based compensation and amortized over the vesting period. Previously, we had not recorded any deferred stock−based compensation expense for these grants, and we are now recording an adjustment of $1,215,000 to deferred compensation and additional paid−in−capital in 2001. As a result and under our policy of amortization under FIN 28, we have increased stock−based compensation expense by $74,000 for the nine months ended September 30, 2003, $380,000 in 2002 and $408,000 in 2001, in these restated financial statements.

We recorded employee deferred stock−based compensation prior to our initial public offering and in connection with our acquisition of TTI, and established a policy to amortize these amounts on an accelerated method under FIN 28. We determined as a result of our review and analysis that the deferred stock−based compensation related to one category of employees was incorrectly amortized using the straight−line method and have made adjustments to consistently apply the FIN 28 method. As a result, we increased stock−based compensation by $72,000 for the nine months ended September 30, 2003, decreased such compensation by $193,000 in 2002 and increased such compensation by $1,690,000 in 2001, in these restated financial statements.

In October 2002, we commenced an offer to exchange outstanding employee stock options for new stock options to be granted by us. We had previously recorded deferred stock−based compensation for options issued prior to our initial public offering, and in conjunction with the exchange offer reversed any remaining unamortized deferred compensation to capital in excess of par value. We have determined as a result of our review and analysis that, in accordance with FIN 44, we should have expensed any remaining deferred stock−based compensation associated with options exchanged under this offer. As a result, we have recognized additional stock−based compensation expense of $562,000 for 2002.

We have determined that we improperly calculated deferred stock−based compensation and the related amortization associated with the restricted stock issued under the TTI Retention Plan. As a result, we have recorded additional deferred stock−based compensation of $242,000 on our balance sheet to capital in excess of par value during the year ended December 31, 2001. We have also recorded an increase in 2002 of $1,353,000 and a decrease in 2001 of $739,000 to stock−based compensation expense to reflect the amortization of deferred stock−based compensation that should have been recorded.

We also determined that we improperly calculated stock−based compensation expense for any intrinsic value associated with the modification of certain stock options and restricted stock to accelerate the vesting of a portion or all of these awards in connection with certain employee terminations. These adjustments resulted in increases in stock−based compensation expense of $200,000 for the nine months ended September 30, 2003, $200,000 in 2002 and $452,000 in 2001.

The following table is a summary of stock−based compensation restatement adjustments by type for the periods indicated, in thousands:

	Nine months ended Sept. 30, 2003	Year ended Dec. 31, 2002	Year ended Dec. 31, 2001
Stock−based Compensation Adjustments—increase/(decrease) for:			
Recapture of compensation expense in connection with employee terminations	$ (229)	$ (4,926)	$ (3,179)
Amortization related to the intrinsic value of options granted to new employees	74	380	408
Adjusted amortization under accelerated method prescribed by FIN 28	72	(193)	1,690
Compensation charge related to options cancelled under Exchange Program	—	562	—
Amortization related to restricted stock issued in connection with TTI Retention Plan	—	1,353	(739)
Charge for modification in connection with employee terminations	200	200	452
Total Stock−based Compensation Restatement Adjustments	$ 117	$ (2,624)	$ (1,368)

As described in Note 1 (m) to our consolidated financial statements, we calculated the fair value of our stock options and the options under our employee stock purchase plan for disclosure purposes as required under SFAS No. 123, *Accounting for Stock−Based Compensation.* These calculations depend, among other factors, on the characteristics of our 2000 Employee Stock Purchase Plan (ESPP) and options with intrinsic value at the grant date. Our calculation did not properly consider these two items.

We have also identified and recorded certain adjustments related to certain stock option activity that had not been previously accounted for or had been previously accounted for in an incorrect period. As a result, we have made adjustments to the summary of stock option activity in Note 14 to our consolidated financial statements.

Inventory Reserves

As of September 30, 2003, December 31, 2002 and December 31, 2001 our originally reported excess, obsolete and evaluation reserve balances were $17,904,000, $17,784,000 and $9,629,000, respectively. We have determined that our excess, obsolete and evaluation reserve balances were not consistently calculated and, as a result of our review of our reserves and consideration of contemporaneous facts and circumstances, we reduced our reserves and reduced cost of product revenues by $937,000 as of and for the nine months ended September 30, 2003, and we increased our reserves and charged cost of product revenues by $522,000 and $3,297,000 as of and for the years ended December 31, 2002 and 2001, respectively.

Other Balance Sheet Adjustments

We identified certain customer checks received by us prior to the end of fiscal year 2002 and the quarter ended September 30, 2003, which were deposited after the reporting period and not recorded in the period received. Accordingly, we have increased our cash and cash equivalents and deferred revenue balances by $8,078,000 and $6,971,000 as of September 30, 2003 and December 31, 2002.

We previously did not record deferred revenue for product shipments and related services for which customers had been invoiced but for which no revenue was recognized and for which payment had not been collected. In this restatement, customer billings for which we have a contractual right to invoice and collectibility is probable have been recorded as accounts receivable on the balance sheet, with a corresponding increase to deferred revenue. Accounts receivable and deferred revenue have increased by $2,123,000 and $90,000 at September 30, 2003 and December 31, 2002.

We previously reported customer deposits as accrued liabilities. In connection with our review and analysis, we have determined that we should report customer deposits as deferred revenue rather than accrued expenses. Accordingly, deferred revenue has increased and accrued liabilities have decreased by $6,576,000 and $7,240,000 as of September 30, 2003 and December 31, 2002.

Other Statement of Operations Adjustments

As described in Note 1 (q) to our consolidated financial statements, we calculated the weighted average common shares outstanding utilized in the determination of loss per share in accordance with the treasury stock method as required under SFAS No. 148, *Earnings Per Share*. Our calculation did not properly consider certain activity and, accordingly, we have modified the weighted average common shares outstanding for 2002 and 2001.

Summary of Restatement Items

The following condensed consolidated statements of operations for the nine months ended September 30, 2003 and the years ended December 31, 2002 and 2001, on a comparative basis, summarize the effects of the restatement adjustments on various line items of our statements of operations for the periods indicated. We anticipate amending our previously filed quarterly reports on Form 10−Q for each of the first three quarters of 2003 for the purpose of restating our consolidated financial statements for the first three quarters of 2003 and 2002. We anticipate that the restated consolidated financial statements in these amended quarterly reports on Form 10−Q will include significant adjustments. See Note 18 to our consolidated financial statements.

Condensed Statements of Operations
As Reported and As Restated
(In thousands, except per share data)

	Nine Months Ended September 30, 2003			Year Ended December 31, 2002		
	As Reported	Adjustments	As Restated	As Reported	Adjustments	As Restated
Revenues	$ 66,019	$ (19,193)	$ 46,826	$ 62,558	$ 31,359	$ 93,917
Cost of revenues	25,270	(4,656)	20,614	40,302	11,274	51,576
Gross profit	40,749	(14,537)	26,212	22,256	20,085	42,341
Operating expenses	47,963	1,020	48,983	92,044	25,370	117,414
Loss from operations	(7,214)	(15,557)	(22,771)	(69,788)	(5,285)	(75,073)
Interest income, net	832	—	832	1,318	—	1,318
Loss before income taxes	(6,382)	(15,557)	(21,939)	(68,470)	(5,285)	(73,755)
Provision for income taxes	—	98	98	—	86	86
Net loss	$ (6,382)	$ (15,655)	$ (22,037)	$ (68,470)	$ (5,371)	$ (73,841)
Net loss per share	$ (0.03)	$ (0.07)	$ (0.10)	$ (0.36)	$ (0.03)	$ (0.39)

	Year Ended December 31, 2001		
	As Reported	Adjustments	As Restated
Revenues	$ 173,199	$ (44,399)	$ 128,800
Cost of revenues	75,698	(12,920)	62,778
Gross profit	97,501	(31,479)	66,022
Operating expenses	747,940	(41,350)	706,590
Loss from operations	(650,439)	9,871	(640,568)
Interest income, net	5,007	(58)	4,949
Net loss	$ (645,432)	$ 9,813	$ (635,619)
Net loss per share	$ (3.74)	$ 0.06	$ (3.68)

PART II

ITEM 6. SELECTED FINANCIAL DATA

The following selected consolidated financial data of Sonus should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and notes to those statements included elsewhere in this report.

See the "Restatement of Consolidated Financial Statements" introductory comment to this Amendment No. 1 to Annual Report on Form 10−K/A and Notes 2, 17 and 18 to our consolidated financial statements for more detailed information regarding the restatement of our consolidated financial statements for the fiscal years ended December 31, 2002 and December 31, 2001 and restated unaudited quarterly data for fiscal quarters during the year ended December 31, 2002 and for the first three fiscal quarters of the year ended December 31, 2003.

	Year ended December 31,				
	2003	2002	2001	2000	1999
	(in thousands, except per share data)				
		As Restated	As Restated		
Consolidated Statement of Operations Data:					
Revenues	$ 93,210	$ 93,917	$ 128,800	$ 51,770	$ —
Cost of revenues(1)	37,909	51,576	62,778	27,848	1,861
Gross profit (loss)	55,301	42,341	66,022	23,922	(1,861)
Operating expenses:					
Research and development(1)	32,190	44,591	63,896	26,430	10,780
Sales and marketing(1)	23,169	27,786	40,876	21,569	5,606
General and administrative(1)	10,475	5,248	12,827	5,477	1,723
Stock−based compensation	3,418	16,871	74,132	26,729	4,404
Amortization of goodwill and purchased intangible assets	2,408	4,229	70,551	—	—
Write−off of goodwill and purchased intangible assets	—	10,950	392,387	—	—
Restructuring charges, net	—	7,739	7,321	—	—
In−process research and development	—	—	44,600	—	—
Total operating expenses	71,660	117,414	706,590	80,205	22,513
Loss from operations	(16,359)	(75,073)	(640,568)	(56,283)	(24,374)
Interest income, net	1,525	1,318	4,949	6,245	487
Loss before income taxes	(14,834)	(73,755)	(635,619)	(50,038)	(23,887)
Provision for income taxes	302	86	—	—	—
Net loss	(15,136)	(73,841)	(635,619)	(50,038)	(23,887)
Beneficial conversion feature of Series C preferred stock	—	—	—	—	(2,500)
Net loss applicable to common stockholders	$ (15,136)	$ (73,841)	$ (635,619)	$ (50,038)	$ (26,387)
Net loss per share(2):					
Basic and diluted	$ (0.07)	$ (0.39)	$ (3.68)	$ (0.52)	$ (1.84)
Pro forma basic and diluted				(0.37)	(0.25)
Shares used in computing net loss per share(2):					
Basic and diluted	220,696	191,008	172,905	95,877	14,324
Pro forma basic and diluted				135,057	96,188

	December 31,				
	2003	2002	2001	2000	1999
			(in thousands)		
		As Restated	As Restated		
Consolidated Balance Sheet Data:					
Cash, cash equivalents and marketable securities	$ 305,392	$ 118,138	$ 125,013	$ 142,065	$ 23,566
Working capital	260,962	60,946	81,895	135,597	19,604
Total assets	358,424	153,517	216,206	194,835	30,782
Long−term deferred revenue, less current portion	24,302	8,024	3,942	—	—
Long−term liabilities, less current portion	829	3,293	1,289	—	3,402
Convertible subordinated note	10,000	10,000	10,000	—	—
Redeemable convertible preferred stock	—	—	—	—	46,109
Total stockholders' equity (deficit)	234,435	56,421	110,566	150,706	(25,199)

(1)

Excludes non−cash, stock−based compensation expense as follows:

	Year ended December 31,				
	2003	2002	2001	2000	1999
			(in thousands)		
		As Restated	As Restated		
Cost of revenues	$ 45	$ 235	$ 1,304	$ 404	$ 92
Research and development	1,180	8,930	42,764	11,428	1,537
Sales and marketing	1,542	4,941	17,968	12,051	2,104
General and administrative	651	2,765	12,096	2,846	671
	$ 3,418	$ 16,871	$ 74,132	$ 26,729	$ 4,404

(2)

See Note 1(q) to our consolidated financial statements for an explanation of the method of calculation. Pro forma per share calculation reflects the conversion of all outstanding shares of redeemable convertible preferred stock into shares of common stock which occurred upon the closing of our IPO in May 2000, as if the conversion occurred at the date of original issuance.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion should be read in conjunction with our consolidated financial statements and notes to those statements and other financial information appearing elsewhere in this report. The following discussion contains forward looking information that involves risks and uncertainties. Our actual results could differ materially from those anticipated in the forward looking statements as a result of a number of factors, including the risks discussed in "Risk Factors" and elsewhere in this report.

The following discussion and analysis gives effect to the restatement described above in the "Restatement of Consolidated Financial Statements" introductory comment to this Amendment No. 1 to Annual Report on Form 10−K/A and in Note 2 to our consolidated financial statements. For this reason, the data set forth in this section may not be comparable to discussions and data in our previously filed annual and quarterly reports.

Overview

We are a leading supplier of packet voice infrastructure solutions for wireline and wireless service providers. Our products are a new generation of carrier class switching equipment and software that enable voice services to be delivered over packet based networks.

We began shipping product to customers during the fourth quarter of fiscal 1999 and recorded our first revenues of $51.8 million in fiscal 2000 and revenues of $128.8 million in fiscal 2001, $93.9 million in fiscal 2002 and $93.2 million in fiscal 2003. Significant declines in capital spending by telecommunications service providers, and financial difficulties, including in some cases bankruptcies, experienced by certain emerging service providers, including some of our customers, caused the reduction in our revenues in 2002. In response to the unfavorable economic conditions, commencing in the third quarter of fiscal 2001 and continuing through fiscal 2002, we implemented restructuring plans designed to reduce expenses and align our cost structure with our revised business outlook. The restructuring plans included worldwide workforce reductions, consolidation of excess facilities and the write−off of excess inventory and purchase commitments.

For the year ended December 31, 2003, Qwest Communications (Qwest), Verizon Global Networks, AT&T Wireless Services and Global Crossing contributed 18%, 15%, 13% and 11% of our revenues. For the year ended December 31, 2002, Qwest contributed 42% of our revenues. For the year ended December 31, 2001, Nissho Electronics Corporation, XO Communications and Global Crossing contributed 21%, 21% and 18% of our revenues.

In 2003, the challenging business environment in the telecommunications industry continued to affect the spending by service providers for products such as those we offer. In the second half of the year, there was a trend towards increased interest and activity in the market for packet−based voice infrastructure products. While it remains uncertain as to the speed and extent of the adoption of carrier packet voice infrastructure products by large carriers, we believe that over time the market opportunity for packet voice solutions is substantial. For fiscal 2003, revenues were $93.2 million compared to $93.9 million in fiscal 2002, and deferred revenues at the end of 2003 increased to $87.0 million compared to $59.8 million at the end of 2002. In 2003, we had a lesser concentration of customers. In 2002, one customer represented 42% of revenues due to the deferral of revenue on product shipped during 2001. The related deferred revenue was recognized as revenue in 2002 upon the delivery of a specified software release in the second quarter of 2002.

We sell our products primarily through a direct sales force and, in some markets, through resellers and distributors. Customers' decisions to purchase our products to deploy in commercial networks involve a significant commitment of resources and a lengthy evaluation, testing and product qualification process. We believe these long sales cycles, as well as our expectation that customers will

tend to sporadically place large orders with short lead times and the application of complex revenue recognition rules to certain transactions, may cause our revenues and results of operations to vary significantly and unexpectedly from quarter to quarter. We expect to recognize revenues from a limited number of customers for the foreseeable future.

Since our inception, we have incurred significant losses and, as of December 31, 2003, had an accumulated deficit of $808.6 million. Although we achieved profitability in the second quarter of fiscal 2002 and the fourth quarter of fiscal 2003, we have not achieved profitability on an annual basis and may incur additional net losses in future quarters and years. The quarterly net income in the second quarter of 2002 and the fourth quarter of 2003 was primarily the result of recognizing previously deferred revenue of $27.5 million and $10.9 million, respectively, from arrangements with a single customer. The previously deferred revenue was recognized as revenue upon the delivery of certain specified software releases in the second quarter of 2002 and the fourth quarter of 2003. We have a lengthy sales cycle for our products and, accordingly, we expect to incur sales and other expenses before we realize the related revenues. We expect to continue to incur significant sales and marketing, research and development and general and administrative expenses and, as a result, we will need to generate significant revenues to maintain profitability.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements and related disclosures requires management to make judgments, assumptions and estimates that affect the amounts reported in the consolidated financial statements and accompanying disclosures. Management bases its estimates and judgments on historical experience, market trends and other factors that are believed to be reasonable under the circumstances. On an on−going basis, we re−evaluate our estimates for changes in facts and circumstances, and material changes in these estimates could occur in the future if past experience or other assumptions do not turn out to be substantially accurate. Changes in estimates are recorded in the period in which they become known.

A summary of those accounting policies, significant judgments and estimates that we believe are most critical to fully understanding and evaluating our financial results is set forth below. This summary should be read in conjunction with our consolidated financial statements and the related notes included elsewhere in this report.

Revenue Recognition. We recognize revenues from product sales when persuasive evidence of an arrangement exists, delivery has occurred, the sales price is fixed or determinable and collectibility of the related receivable is probable, unless we have future obligations, including a requirement to deliver additional elements which are essential to the functionality of the delivered elements or for which VSOE does not exist or customer acceptance is required, in which case the revenues and related costs are deferred until those obligations are satisfied or contingencies are resolved.

Many of our sales are generated from complex contractual arrangements, which require significant revenue recognition judgments, particularly in the case of multiple element arrangements. When a sale involves multiple elements, such as products, maintenance or professional services, we allocate the entire sales price to each respective element based on VSOE or using the residual method when VSOE cannot be established for one of the delivered elements in the arrangement. We then recognize revenues on each element in accordance with our policies for product and service revenue recognition. We determine VSOE based upon the price charged when the same element is sold separately. If we cannot establish VSOE for each undelivered element, we defer the entire contract revenues until the earlier of the establishment of VSOE or delivery of the undelivered element.

In addition, if an arrangement with a customer includes a specified upgrade right for which VSOE cannot be established, we defer all revenue related to the arrangement until the earlier of the delivery of the specified upgrade or the establishment of VSOE for the specified upgrade. In determining whether a specified upgrade right exists, we have concluded that if the specified upgrade is included in the customer contract or otherwise becomes part of the arrangement with the customer, then a specified upgrade right exists. We have concluded that communications with customers in the normal course of business regarding customer feature requests and our product plans do not create specified upgrade rights.

Maintenance and support services are recognized ratably over the life of the maintenance and support service period, which typically is one year when the services are sold separately and up to five years when bundled with the product fees. Maintenance and support services include telephone support and unspecified rights to product upgrades and enhancements. These services are typically sold for a one−year term and either are sold as part of a multiple element arrangement with products or are sold independently at time of renewal. Maintenance and support VSOE represents a consistent percentage of the sales prices charged to customers. The application of judgment could affect the continued determination of maintenance VSOE and our ability to recognize revenue using the residual method.

Installation service revenues are typically recognized at the time of the related product revenue recognition as installation is typically complete by the time of product revenue recognition. Professional services are recognized as the services are performed.

We sell the majority of our products directly to end−users. For products sold through resellers and distributors we recognize revenues on a sell−through method utilizing information provided to us from our resellers and distributors.

Product shipped to customers and related services where amounts are (1) billed pursuant to a contractual right and collection is probable, or (2) collected prior to satisfying the revenue recognition criteria are reflected as deferred revenues. Deferred revenues also include customer deposits and amounts associated with maintenance contracts, which are recognized on a straight−line basis over the related service periods, and free or discounted products and services not yet provided to customers. Deferred revenues not expected to be recognized within one year of the balance sheet date are classified as long−term deferred revenues.

We defer any incremental direct costs, such as inventory, royalties, commissions and third−party installation costs, incurred prior to satisfaction of our revenue recognition criteria and record them in proportion to revenue recognized.

Loss Contingencies. We are subject to ongoing business risks that affect the estimation process of the carrying value of assets, the recording of liabilities and the possibility of various loss contingencies, arising in the ordinary course of business. Under SFAS No. 5, an estimated loss contingency is accrued when it is probable that a liability has been incurred or an asset has been impaired and the amount of loss can be reasonably estimated. We regularly evaluate current information available to us to determine whether such amounts should be adjusted. Based on our analysis, we have established the following allowance and reserves:

Allowance for Doubtful Accounts. We establish billing terms at the time we negotiate purchase agreements with our customers. We continually monitor timely payments and assess any collection issues. The allowance for doubtful accounts is based on our detailed assessment of the collectibility of specific customer accounts. While we believe that our allowance for doubtful accounts is adequate and that the judgment applied is appropriate, if there is a deterioration of a customer's creditworthiness or actual defaults are higher than our historical experience, the actual results could differ from these estimates. While such credit losses have historically been within our expectations and the allowances we established, we cannot guarantee that we will continue to

experience the same credit loss rates that we have in the past. If the financial condition of our customers were to deteriorate, resulting in an impairment of their ability to make payment, additional allowances may be required. Our failure to accurately estimate the losses for doubtful accounts and ensure that payments are received on a timely basis could have a material adverse effect on our business, financial condition and results of operations.

Inventory Reserves. Inventory purchases and commitments are based upon estimated future demand for our products. We value inventory at the lower of cost or net realizable value and provide inventory reserves based on excess and obsolete inventory determined primarily by future demand forecasts and record changes to such reserves through adjustments to cost of revenues. We assess such demand forecasts on at least a quarterly basis. If we record a charge to reduce inventory to its estimated net realizable value, we cannot increase its carrying value due to subsequent changes in demand forecasts. Accordingly, if inventory previously written down to its net realizable value is subsequently sold, we may realize improved gross profit margins on those transactions.

We also record a full inventory reserve for evaluation equipment at the time of shipment to our customers as a charge to sales and marketing expense as our experience with this type of inventory indicates it is probable that the inventory will not be realizable. If these evaluation shipments should convert to revenue, we record a benefit to sales and marketing expense and record the full cost of revenues in the period of revenue recognition.

We have experienced significant changes in our product demand and, as a result, our required inventory reserves have fluctuated in recent periods. As of December 31, 2003 and 2002, inventory of $13.7 million and $10.4 million was net of reserves of $13.8 million and $18.3 million. It is possible that significant changes in required inventory reserves may continue to occur in the future if there is a sudden and significant change in the demand for our products, changes in the amount of customer evaluation inventory or higher risks of inventory obsolescence because of rapidly changing technology.

Warranty Reserve. Our products are covered by a standard warranty of 90 days for software and one year for hardware. In addition, certain customer contracts include warranty−type provisions for epidemic or similar product failures generally for the contractual period or the life of the product in accordance with published telecommunications standards. We accrue for such contingent obligations when the occurrence of such obligation is probable and the amount of such obligation is reasonably estimable. We have not incurred significant costs related to such provisions. Our customers typically purchase maintenance and support contracts, which encompass our warranty obligations. Our warranty reserve reflects estimated material and labor costs for potential or actual product issues in our installed base that are not covered under our maintenance contracts but for which we expect to incur an obligation. Our estimates of anticipated rates of warranty claims and costs are primarily based on historical information and future forecasts.

In addition, certain of our customer contracts include provisions under which we may be obligated to pay penalties generally for the contractual period or for the life of the product if our products fail or do not perform in accordance with specifications. We accrue for such contingent obligations when the occurrence of such obligation is probable and the amount of such obligation is reasonably estimable. We have not incurred significant costs related to such provisions. We periodically assess the adequacy of our recorded warranty liabilities and adjust the amounts as necessary. While we believe our warranty reserve is adequate to address known warranty issues, an increase in product failures rates, material usage or service delivery costs may result in an increase to our warranty reserve and our gross profit could be adversely affected.

Royalty Accrual. We accrue for royalties related to technology we license from vendors based on established royalty rates and usage. In certain cases, we have been contacted by third parties, who claim that our products infringe on certain intellectual property of the third party. We evaluate these claims and accrue for royalties when the amounts are probable and reasonably estimable. While we believe that the amounts accrued for estimated royalties are adequate, the amounts required to ultimately settle royalty obligations may be different.

Reserve for Litigation and Legal Fees. We are subject to various legal claims, including securities litigation and intellectual property claims. We reserve for legal contingencies and legal fees when the amounts are probable and reasonably estimable. Our director and officer liability insurance policies provide only limited liability protection relating to the securities class action and derivative lawsuits against us and certain of our officers and directors. We intend to defend these matters vigorously, although the ultimate outcome of these items is uncertain and the potential loss, if any, may be significantly higher or lower than the amounts we have previously accrued.

Accounting for Income Taxes. SFAS No. 109, *Accounting for Income Taxes*, requires the establishment of a valuation allowance to reflect the likelihood of realization of deferred tax assets. Significant management judgment is required in determining our provision for income taxes, our deferred tax assets and liabilities and any valuation allowance recorded against our net deferred tax assets. We evaluate all available evidence, such as recent and expected future operating results by tax jurisdiction, and current and enacted tax legislation and other temporary differences between book and tax accounting, to determine whether it is more likely than not that some portion or all of the deferred income tax assets will not be realized.

As a result of net operating losses incurred in most jurisdictions in which we operate in the past, and uncertainty as to the extent, jurisdiction and timing of profitability in future periods, we have continued to record a full valuation allowance against deferred tax assets, which was approximately $104.7 million as of December 31, 2003. The establishment and amount of the valuation allowance requires significant estimates and judgment and can materially affect our results of operations. If the realization of deferred tax assets in the future is considered more likely than not, an adjustment to the deferred tax assets would increase net income in the period such determination was made. Our effective tax rate may vary from period to period based on changes in estimated taxable income or loss in each jurisdiction, changes to the valuation allowance, changes to federal, state or foreign tax laws, future expansion into areas with varying country, state and local income tax rates, deductibility of certain costs and expenses by jurisdiction and as a result of acquisitions.

Valuation of Long−Lived Assets. In accordance with SFAS No. 144, the carrying value of intangible assets and other long−lived assets is reviewed on a regular basis for the existence of facts or circumstances, both internally and externally, that may suggest impairment. Factors we consider important which could trigger an impairment review include:

- Significant underperformance relative to historical or projected future operating results;
- Significant negative industry or economic trends;
- Significant change in circumstances relative to a large customer;
- Significant decline in our stock price for a sustained period; and
- Our market capitalization relative to our net book value.

If such circumstances exist, we evaluate the carrying value of long−lived assets, other than goodwill, to determine if impairment exists based upon estimated undiscounted future cash flows over the remaining useful life of the assets and comparing that value to the carrying value of the assets. In determining expected future cash flows, assets are grouped at the lowest level for which cash flows are

identifiable and independent of cash flows from other asset groups. If the carrying value of the asset is greater than the estimated future cash flows, the asset is written down to its estimated fair value. The estimated undiscounted future cash flows and valuation of long−lived assets requires significant estimates and assumptions, including revenue and expense growth projections and fair value estimates such as estimated replacement cost and relief from royalty. These estimates contain management's best estimates, using appropriate and customary assumptions and projections at the time. If different estimates or assumptions are used, it is reasonably possible that our analysis would generate materially different results. As of December 31, 2003 and 2002, we had $2.4 million and $4.8 million of intangible assets. As of December 31, 2001 we had no remaining goodwill and thus were not subject to the transitional provisions of SFAS No. 142.

Stock−based Compensation. In October 1995, the FASB issued SFAS No. 123, *Accounting for Stock−Based Compensation*. SFAS No. 123 provides that companies may account for stock−based compensation under either the fair value−based method of accounting under SFAS No. 123 or the intrinsic value−based method provided by APB No. 25, *Accounting for Stock Issued to Employees*. We use the intrinsic value based method of APB No. 25 to account for all of our employee stock−based compensation plans and use the fair value method of SFAS No. 123 to account for all non−employee stock−based compensation. We follow FIN 28, and amortize the intrinsic value as measured under APB No. 25 on an accelerated basis. SFAS No. 123, as amended by SFAS No. 148, *Accounting for Stock−Based Compensation—Transition and Disclosure—an amendment of FASB Statement No. 123*, requires companies following APB No. 25 to make pro forma disclosure in the notes to the consolidated financial statements using the measurement provisions of SFAS No. 123.

Restructuring and Other Related Charges. We established exit plans for each of the restructuring activities which took place in 2001 and 2002 and accounted for these plans in accordance with Emerging Issues Task Force (EITF) Issue No. 94−3, *Liability Recognition for Certain Employee Benefits and Other Costs to Exit an Activity (including Certain Costs incurred in a Restructuring)*. These exit plans required that we make estimates as to the nature, timing and amount of the exit costs that we specifically identified. The consolidation of facilities required us to make estimates, which included contractual rental commitments or lease buy−outs for office space being vacated and related costs and leasehold improvement write−downs, offset by estimated sub−lease income. We have remaining accrued exit costs of $1,324,000 as of December 31, 2003, which relate to remaining lease payments. SFAS No. 146, *Accounting for Costs Associated with Exit or Disposal Activities*, was effective for exit or disposal activities that are initiated after December 31, 2002. SFAS No. 146 requires that a liability for a cost that is associated with an exit or disposal activity be recognized when the liability is incurred. A liability is recognized when the severance amounts relate to prior services rendered, the payment of the amount is probable and the amount can be reasonably estimated.

Results of Operations

Years Ended December 31, 2003 and 2002

Revenues. Revenues for the years ended December 31, 2003 and 2002 were as follows, in thousands:

	2003	2002
		As Restated
Revenues:		
Product	$ 60,851	$ 68,572
Service	32,359	25,345
Total revenues	$ 93,210	$ 93,917

Product revenues comprise sales of our voice infrastructure products, including our GSX9000™ Open Services Switch, the Insignus™ Softswitch, the Sonus Insight™ Management System and related product offerings. Product revenues for fiscal 2003 decreased 11% from fiscal 2002. In 2003, we had a lesser concentration of customers. In 2002, one customer represented 42% of revenues due to the deferral of revenue on product shipped during 2001. The related deferred revenue was recognized as revenue in 2002 upon the completion of the delivery of a specified software upgrade in the second quarter of 2002. Absent this, market conditions in 2003 for the sale of voice infrastructure products to telecommunications providers improved.

Service revenues primarily comprise hardware and software maintenance, network design and other professional services. Service revenues for fiscal 2003 increased 28% from fiscal 2002. The increase in service revenues was primarily due to an increase in maintenance revenue as a result of the growing installed customer base and the completion of significant professional services and installation projects during the year.

For the years ended December 31, 2003 and 2002, four customers and one customer each contributed more than 10% of our revenues, representing an aggregate of 57% and 42% of total revenues. International revenues, primarily from Asia and Europe, were 21% and 18% of revenues for the years ended December 31, 2003 and 2002.

The following customers contributed 10% or more of our revenues in the years ended December 31, 2003 and 2002:

Customer	2003	2002
Qwest Communications	18%	42%
Verizon Global Networks	15	*
AT&T Wireless Services	13	—
Global Crossing	11	*

* Represents less than 10% of revenues.

Our total deferred revenues for products were $47.9 million and $34.9 million as of December 31, 2003 and 2002. Our total deferred revenues for maintenance and support were $39.1 million and $24.8 million as of December 31, 2003 and 2002. The increase in deferred product revenue was attributable to timing and delivery and acceptance of customer orders. The increase in deferred revenues for maintenance and support was attributable to the growing installed customer base.

Cost of Revenues/Gross Profit. Our cost of revenues consists primarily of amounts paid to third party manufacturers for purchased materials and services, manufacturing and professional services personnel and related costs and inventory obsolescence. Manufacturing engineering, documentation control, final testing and assembly are performed at our facility. Cost of revenues and gross profit as a

percentage of revenues for the years ended December 31, 2003 and 2002 were as follows (in thousands, except percentages):

	2003	2002
		As Restated
Cost of revenues:		
Product	$ 23,575	$ 33,573
Service	14,334	11,873
Write−off of inventory and purchase commitments	—	6,130
Total cost of revenues	$ 37,909	$ 51,576
Gross profit (% of respective revenues):		
Product	61%	51%
Service	56	53
Total gross profit	59	45(1)

(1) Includes the impact of a $6.1 million charge for the write−off of inventory and purchase commitments.

The increase in product gross profit as a percentage of revenues, excluding the write−offs, was primarily due to a greater proportion of revenues of higher margin software as well as the benefit resulting from the sale of inventory previously written down of $5.6 million. In 2002, included in cost of product revenues is $3.0 million for technology and intellectual property licensing related to our products. The increase in service gross profit as a percentage of revenues was primarily due to our ability to leverage scalability of our service organization to fulfill customer service functions.

Research and Development Expenses. Research and development expenses consist primarily of salaries and related personnel costs and prototype costs related to the design, development, testing and enhancement of our products. Research and development expenses were $32.2 million for fiscal 2003, a decrease of $12.4 million, or 28%, from $44.6 million in fiscal 2002. The decrease primarily reflects a reduction in staffing levels and related expenses attributable to restructuring actions and depreciation expense, partially offset by the cessation in April 2003 of a temporary salary reduction imposed in April 2002. Rapid technological innovation is critical to our long−term success and we intend to continue to make substantial investments to enhance our products and technologies to meet the requirements of our customers and market. Accordingly, we believe that our research and development expenses for fiscal 2004 will increase from fiscal 2003 primarily as a result of additional hiring due to the continuing expansion of our product lines, particularly our access products, and customer demand.

Sales and Marketing Expenses. Sales and marketing expenses consist primarily of salaries and related personnel costs, commissions, travel and entertainment expenses, promotions, customer evaluations and other marketing expenses. Sales and marketing expenses were $23.2 million for fiscal 2003, a decrease of $4.6 million, or 17%, from $27.8 million in fiscal 2002. The decrease primarily reflects a reduction in staffing levels and related expenses attributable to restructuring actions partially offset by the cessation in April 2003 of a temporary salary reduction imposed in April 2002. We believe that our sales and marketing expenses in fiscal 2004 will increase modestly from the fiscal 2003 level primarily as a result of an increase in hiring due to the expansion of our international operations and forecasted higher commissions attributable to increased sales volumes.

General and Administrative Expenses. General and administrative expenses consist primarily of salaries and related personnel costs for executive and administrative personnel, recruiting expenses, allowance for doubtful accounts and professional fees. General and administrative expenses were $10.5 million for fiscal 2003, an increase of $5.3 million, or 100%, from $5.2 million in fiscal 2002. The increase primarily reflects a $4.6 million increase in independent registered public accounting firm audit fees incurred related to our restatements. We believe that our general and administrative expenses in fiscal 2004 will increase materially from the fiscal 2003 level primarily as a result of additional professional fees incurred as part of our investigation, the SEC investigation and securities class action litigation, and for costs associated with improvements we expect to make in our internal control environment to remedy material weaknesses and to meet the requirements of Section 404 of the Sarbanes−Oxley Act of 2002.

Stock−based Compensation Expenses. Stock−based compensation expenses include the amortization of deferred stock−based compensation resulting primarily from the granting of stock options and stock awards to TTI employees under the 2000 Retention Plan and sales of restricted common stock in connection with our acquisition of TTI. The compensation expense associated with non−employees is recorded at the time services are provided. As of December 31, 2003, we expect to record approximately $564,000 in employee stock based compensation expense for fiscal 2004.

Stock−based compensation expenses were $3.4 million for fiscal 2003, a decrease of $13.5 million, or 80%, from $16.9 million in fiscal 2002. The decrease is primarily attributable to lower deferred compensation balances resulting from normal amortization, calculated on the accelerated model under FIN 28 as described in Note 1 (m) to our consolidated financial statements, as well as write−offs made in connection with employee terminations and our offer to exchange certain employee stock options in October 2002 described below, which resulted in a charge of $562,000.

On October 16, 2002, we commenced an offer to exchange (Exchange Offer) outstanding employee stock options for new stock options to be granted on a date that is at least six months and one day from the expiration date of the Exchange Offer. The Exchange Offer expired on November 22, 2002, and outstanding options to purchase approximately 8,973,000 shares of common stock were accepted for exchange and cancelled. On May 27, 2003, employees received an option to purchase one share of common stock for each share of common stock under the exchanged options at an exercise price of $4.08 per share, representing the fair market value of our common stock on the date of grant.

Goodwill, Purchased Intangible Assets and In−Process Research and Development Expenses. In fiscal 2001, we acquired certain intellectual property, in−process research and development and intangible assets in connection with our acquisitions of TTI and Linguateq. Amortization of purchased intangible assets was $2.4 million for fiscal 2003, a decrease of $1.8 million, or 43%, from $4.2 million for fiscal 2002. In the third quarter of fiscal 2002, in accordance with SFAS No. 142, in response to unfavorable business conditions, we re−evaluated the fair value of our goodwill and as a result recorded a non−cash impairment charge of $10.9 million for the write−off of goodwill established in connection with the acquisitions of TTI and Linguateq. The decrease in amortization expenses for 2003 is due to the write−off of certain purchased intangibles in fiscal 2002. We expect to recognize amortization expense of $2.4 million in fiscal 2004 for the remaining value of the intangible assets.

Restructuring Charges, net. Commencing in the third quarter of fiscal 2001 and extending through fiscal 2002, in response to unfavorable business conditions primarily caused by significant reductions in capital spending by telecommunications service providers, we implemented restructuring actions designed to reduce expenses and align our cost structure with our revised business outlook. The restructuring actions included worldwide workforce reductions, consolidation of excess facilities and the write−off of inventory and purchase commitments. See Note 3 to our consolidated financial statements.

Workforce reduction. In fiscal 2002, we reduced our worldwide work force for which we recorded a charge of $5.3 million. As of December 31, 2003, all cash expenditures had been made related to this reduction.

Consolidation of excess facilities. In fiscal 2002, we recorded a net restructuring charge of $2.5 million for the additional consolidation of excess facilities, of which $1.0 million was paid in 2002 and $1.1 million was paid in 2003. As of December 31, 2003, we expected to pay the remaining $1.1 million relating to the consolidation of excess facilities through 2008.

Write−off of inventory and purchase commitments. In fiscal 2002, we recorded net charges to cost of revenues of $6.1 million, consisting of $4.5 million for excess and obsolete inventory and $1.6 million for purchase commitments that were in excess of required quantities. The charge for purchase commitments was recorded on the balance sheet as accrued restructuring expenses.

Interest Income (Expense), net. Interest income consists of interest earned on our cash balances and marketable securities. Interest expense consist of interest incurred on convertible subordinated notes, equipment financing and capital lease arrangements. Interest income, net of interest expense, was $1.5 million for fiscal 2003, an increase of $200,000 from $1.3 million in fiscal 2002. The increase reflects an increase in our cash and investments balances from our completed public offerings in April and September 2003.

Net Operating Loss Carryforwards. As of December 31, 2003, we had approximately $190.0 million of federal net operating loss carryforwards for tax purposes available to offset future taxable income. These net operating loss carryforwards expire at various dates through 2023, to the extent that they are not used. We have not recognized any benefit from the future use of net operating loss carryforwards for fiscal 2003 and 2002, or for any other periods since inception. Use of the net operating loss carryforwards may be limited in future years if there is a significant change in our ownership. We have recorded a full valuation allowance for the related net deferred tax asset due to the uncertainty of realizing the benefit of this asset.

Income Taxes. We have provided $302,000 in 2003 and $86,000 in 2002 for foreign income taxes and state minimum taxes in the United States.

Years Ended December 31, 2002 and 2001

Revenues. Revenues for the years ended December 31, 2002 and 2001 were as follows, in thousands:

	2002	2001
	As Restated	**As Restated**
Revenues:		
Product	$ 68,572	$ 104,646
Service	25,345	24,154
Total revenues	$ 93,917	$ 128,800

Product revenues for fiscal 2002 decreased 34% from fiscal 2001. The decrease in product revenues was the result of significant declines in capital spending by telecommunications service providers and financial difficulties, including in some cases bankruptcies, experienced by certain emerging service providers, including some of our customers. In 2002, one customer represented 42% of revenues, which were primarily related to the delivery of a specified software upgrade in 2002 from a shipment completed in 2001. Service revenues for fiscal 2002 increased 5% from fiscal 2001 primarily due to a greater installed base of products under maintenance contracts and an increase in product installation revenues.

The following customers contributed 10% or more of our revenues in the years ended December 31, 2002 and 2001:

Customer	2002	2001
Qwest Communications	42%	—%
Nissho Electronics Corporation	*	21
XO Communications	*	21
Global Crossing	*	18

* Represents less than 10% of revenues.

Cost of Revenues/Gross Profit. Cost of revenues and gross profit as a percentage of revenues for the years ended December 31, 2002 and 2001 were as follows (in thousands, except percentages):

	2002 As Restated	2001 As Restated
Cost of revenues:		
Product	$ 33,573	$ 43,717
Service	11,873	19,061
Write−off of inventory and purchase commitments	6,130	—
Total cost of revenues	$ 51,576	$ 62,778
Gross profit (% of respective revenues):		
Product	51%	58%
Service	53	21
Total gross profit	45(1)	51

(1) Includes the impact of a $6.1 million charge for the write−off of inventory and purchase commitments.

The decrease in product gross profit as a percentage of revenues, excluding the write−offs, was primarily due to a higher proportion of fixed costs resulting from the significant decline in revenue as well as $3.0 million for technology and intellectual property licensing related to our products in 2002. The increase in service gross profit as a percentage of revenues was primarily due to cost−cutting measures attributed to our restructuring actions.

Research and Development Expenses. Research and development expenses were $44.6 million for fiscal 2002, a decrease of $19.3 million, or 30%, from $63.9 million in fiscal 2001. The decrease primarily reflects a reduction in salaries, related expenses attributable to restructuring actions and, to a lesser extent, reductions in consulting fees and prototype costs.

Sales and Marketing Expenses. Sales and marketing expenses were $27.8 million for fiscal 2002, a decrease of $13.1 million, or 32%, from $40.9 million in fiscal 2001. The decrease primarily reflects a reduction in salaries and related expenses attributable to restructuring actions and a reduction in commissions due to the decline in revenues, partially offset by increased costs for customer evaluation equipment.

General and Administrative Expenses. General and administrative expenses were $5.2 million for fiscal 2002, a decrease of $7.6 million, or 59%, from $12.8 million in fiscal 2001. The decrease primarily reflects reductions in salaries and related expenses attributable to restructuring actions, consultants and a reduction in the provision for doubtful accounts, and, to a lesser extent, reductions in travel and entertainment and supplies.

Stock−based Compensation Expenses. Stock−based compensation expenses were $16.9 million for fiscal 2002, a decrease of $57.2 million, or 77%, from $74.1 million in fiscal 2001. The decrease is primarily attributable to lower deferred compensation balances resulting from normal amortization, calculated on the accelerated model under FIN 28 as described in Note 1 (m) to our consolidated

financial statements, write−offs made in connection with employee terminations and our offer to exchange certain employee stock options.

Goodwill, Purchased Intangible Assets and In−Process Research and Development Expenses. In January 2001, we acquired certain intellectual property, in−process research and development and intangible assets in connection with our acquisition of TTI, which resulted in the recording of $520.6 million of goodwill and other intangibles. Results for fiscal 2001 included a $40.8 million write off of TTI purchased in−process research and development. Amortization of TTI purchased intangible assets was $3.9 million for fiscal 2002, a decrease of $66.5 million from $70.4 million for fiscal 2001. This decrease is primarily the result of a write−off of $392.4 million of TTI goodwill and purchased intangible assets in fiscal 2001. See Notes 4 and 5 to our consolidated financial statements.

In July 2001, we completed the acquisition of certain intellectual property and other assets of privately−held Linguateq, a provider of data distribution and billing application software, which resulted in the recording of $5.2 million of goodwill and purchased intangible assets. Results for fiscal 2001 included a non−cash charge of $3.8 million for purchased in−process research and development. Amortization of Linguatec purchased intangible assets was $358,000 for fiscal 2002, an increase of $191,000 from $167,000 for fiscal 2001. See Note 6 to our consolidated financial statements.

Write−Off of Goodwill and Purchased Intangible Assets. In response to unfavorable business conditions, we re−evaluated the fair value of goodwill established in connection with the acquisitions of TTI and Linguatec and as a result recorded a non−cash impairment charge of $11.0 million in fiscal 2002 for the write−off of goodwill.

In fiscal 2001, in light of negative industry and economic conditions, a general decline in technology valuations and our decision to discontinue the development and use of certain acquired technology, we performed an assessment of the carrying value of the goodwill and purchased intangible assets recorded in connection with our acquisition of TTI. In accordance with SFAS No. 121, we recorded a non−cash impairment charge of $392.4 million in fiscal 2001 for the write−off of goodwill and certain purchased intangible assets because the estimated undiscounted future cash flows of these assets was less than the carrying value.

Restructuring Charges, net. Commencing in the third quarter of fiscal 2001 and continuing through fiscal 2002, in response to unfavorable business conditions primarily caused by significant reductions in capital spending by telecommunications service providers, we implemented restructuring actions designed to reduce expenses and align our cost structure with our revised business outlook. The restructuring actions included worldwide workforce reductions, consolidation of excess facilities and the write−off of inventory and purchase commitments. See Note 3 to our consolidated financial statements.

> ***Workforce reduction.*** Restructuring actions in fiscal 2001 resulted in the reduction of our work force by approximately 150 employees, or 21%. Restructuring actions in fiscal 2002 reduced the work force by an additional 230 employees, or 39%. The affected employees were entitled to severance and other benefits for which we recorded charges of $5.3 million in fiscal 2002 and $3.5 million in fiscal 2001.
>
> ***Consolidation of excess facilities and other charges.*** We recorded net restructuring charges of $2.5 million and $3.8 million in fiscal 2002 and 2001 for the consolidation of excess facilities and other miscellaneous charges, which are included on the balance sheet as accrued restructuring expenses and long−term obligations.
>
> ***Write−off of inventory and purchase commitments.*** During fiscal 2002, we recorded charges to cost of revenues of $6.1 million, consisting of $4.5 million for excess and obsolete inventory and $1.6 million for purchase commitments that are in excess of required quantities.

Interest Income (Expense), net. Interest income consists of interest earned on our cash balances and marketable securities. Interest expense consists of interest incurred on convertible subordinated notes, equipment financing and capital lease arrangements. Interest income, net of interest expense, was $1.3 million for fiscal 2002, a decrease of $3.6 million from $4.9 million in fiscal 2001. The decrease primarily reflects a reduction in interest rates and average invested balances.

Income Taxes. We have provided $86,000 in 2002 for foreign income taxes and state minimum taxes in the United States. No amounts for income taxes had been provided for fiscal 2001, due to accumulated net losses.

Off−Balance Sheet Arrangements

We have no off−balance sheet arrangements that have or are reasonably likely to have a current or future material effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources.

Liquidity and Capital Resources

At December 31, 2003, our principal source of liquidity was our cash, cash equivalents and marketable securities that totaled $305.4 million. In September 2003, we completed a public offering of 17,000,000 shares of our common stock at a price of $7.75 per share resulting in net proceeds of $126.1 million after deducting offering costs of $5.7 million. In April 2003, we completed a public offering of 20,000,000 shares of our common stock at a price of $3.05 per share, resulting in net proceeds of $56.7 million after deducting offering costs of $4.3 million.

Our operating activities provided net cash of $4.8 million in fiscal 2003, as compared to net cash used of $8.5 million in fiscal 2002. Net cash provided by operating activities in 2003 was attributable primarily to an increase in deferred revenue of $27.2 million, non−cash expense items of $15.5 million, offset in part by a net loss of $15.1 million, an increase in accounts receivable of $19.1 million and an increase in other working capital accounts of $3.7 million.

Net cash used in investing activities was $114.8 million for fiscal 2003, as compared to net cash provided by $11.6 million for fiscal 2002. Net cash used by investing activities for fiscal 2003 primarily reflects net purchases of marketable securities of $110.8 million resulting from the proceeds of our public offerings of common stock completed in April and September 2003, in addition to purchases of property and equipment of $3.2 million. Net cash provided by investing activities for fiscal 2002 primarily reflects net maturities of marketable securities of $15.1 million, partially offset by purchases of property and equipment of $3.4 million. We have no current material commitments for capital expenditures but do expect approximately $7.0 to $10.0 million in capital expenditures during fiscal 2004.

We had a $10.0 million equipment line of credit and a $20.0 million working capital line of credit with a bank available through March 23, 2004. We did not renew the lines of credit upon their expiration. As of December 31, 2003, we had no amounts outstanding under the equipment line of credit. See Note 11 to our consolidated financial statements.

Net cash provided by financing activities was $186.4 million for fiscal 2003, as compared to $5.1 million for fiscal 2002. The net cash provided by financing activities for fiscal 2003 primarily resulted from the net proceeds of $182.8 million from the public offerings of common stock completed in April and September 2003 as well as $6.9 million from the sale of common stock in connection with stock option exercises and our employee stock purchase plan, offset by payments of $3.4 million on the equipment line of credit. The net cash provided by financing activities for fiscal 2002 primarily resulted from proceeds of $3.0 million from the sale of common stock in connection with stock option exercises and our employee stock purchase plan and net borrowings on our bank equipment line of credit.

The following summarizes our future contractual obligations as of December 31, 2003, in thousands:

	Payment Due By Period				
	Total	Less than 1 year	1−3 years	3−5 years	More than 5 years
Contractual Obligations:					
Long−term debt obligations	$ 11,188	$ 475	$ 10,713	$ —	$ —
Capital lease obligations	219	189	30	—	—
Operating lease obligations	4,111	1,693	2,205	213	—
Total	$ 15,518	$ 2,357	$ 12,948	$ 213	$ —

Based on our past performance and current expectations, we believe our current cash, cash equivalents and marketable securities will be sufficient to meet our anticipated cash needs for working capital and capital expenditures for at least 12 months. Although it is difficult to predict future liquidity requirements with certainty, the rate at which we will consume cash will be dependent on the cash needs of future operations, including changes in working capital, which will, in turn, be directly affected by the levels of demand for our products, the timing and rate of expansion of our business and the resources we devote to developing our products. We anticipate devoting substantial capital resources to continue our research and development efforts, to maintain our sales, support and marketing, and for other general corporate activities, as well as to vigorously defend against existing and potential litigation and resolve pending or potential investigations relating to the restatement of our consolidated financial statements. See Note 13 to our consolidated financial statements.

Recent Accounting Pronouncements

In November 2002, the FASB issued FIN 45, *Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others.* FIN 45 elaborates on the disclosures to be made by a guarantor in its interim and annual financial statements about its obligations under certain guarantees that it has issued. It also clarifies that a guarantor is required to recognize, at the inception of a guarantee, a liability for the fair value of the obligation undertaken in issuing the guarantee. The initial recognition and initial measurement provisions of the interpretation are applicable on a prospective basis to guarantees issued or modified after December 31, 2002 and the disclosure requirements in this interpretation are effective for financial statements of interim or annual periods ending after December 15, 2002. The FIN 45 disclosure requirements are included in Note 8(c) to our consolidated financial statements. The adoption of FIN 45 did not have a material impact on our financial position or results of operations.

In January 2003, the FASB issued FIN 46, *Consolidation of Variable Interest Entities* and, in December 2003, issued a revision to that interpretation (FIN 46R). FIN 46R replaces FIN 46 and addresses consolidation by business enterprises of variable interest entities that possess certain characteristics. A variable interest entity (VIE) is defined as (a) an ownership, contractual or monetary interest in an entity where the ability to influence financial decisions is not proportional to the investment interest, or (b) an entity lacking the invested capital sufficient to fund future activities without the support of a third party. FIN 46R establishes standards for determining under what circumstances VIEs should be consolidated with their primary beneficiary, including those to which the usual condition for consolidation does not apply. We currently do not have any variable interest entities.

In May 2003, the FASB issued SFAS No. 150, *Accounting For Certain Financial Instruments with Characteristics of Both Liabilities and Equity,* which establishes standards for how an issuer of financial instruments classifies and measures certain financial instruments with characteristics of both liabilities and equity. SFAS No. 150 requires that an issuer classify a financial instrument that is within its scope

as a liability (or an asset in some circumstances) because that financial instrument embodies an obligation of the issuer. SFAS No. 150 is effective for financial instruments entered into or modified after May 31, 2003, and otherwise is effective at the beginning of the first interim period beginning after June 15, 2003. The adoption of SFAS No. 150 did not have any impact on our overall financial position or results of operations.

In August 2003, the EITF reached a consensus on Issue No. 03−05, *Applicability of AICPA Statement of Position 97−2 to Non−Software Deliverables in an Arrangement Containing More−Than−Incidental Software.* EITF Issue No. 03−05 addresses the applicability of SOP 97−2 to non−software deliverables in an arrangement containing more−than−incidental software. In an arrangement that includes software that is more−than−incidental to the products or services as a whole, software and software−related elements are included within the scope of SOP 97−2. Software−related elements include software products and services, as well as any non−software deliverables for which a software deliverable is essential to its functionality. The adoption of this statement did not have a material impact on our consolidated financial results.

In December 2003, the staff of the SEC issued Staff Accounting Bulletin (SAB) No. 104, *Revenue Recognition,* which supersedes SAB No. 101, *Revenue Recognition in Financial Statements.* SAB No. 104's primary purpose is to rescind the accounting guidance contained in SAB No. 101 related to multiple−element revenue arrangements that was superseded as a result of the issuance of EITF Issue No. 00−21, *Accounting for Revenue Arrangements with Multiple Deliverables.* Additionally, SAB No. 104 rescinds the SEC's related *Revenue Recognition in Financial Statements Frequently Asked Questions and Answers* issued with SAB No. 101 that had been codified in SEC Topic 13, *Revenue Recognition.* While the wording of SAB No. 104 has changed to reflect the issuance of EITF 00−21, the revenue recognition principles of SAB No. 101 remain largely unchanged by the issuance of SAB No. 104, which was effective upon issuance. We adopted the provisions of SAB No. 104 in the fourth quarter of 2003. Our adoption of SAB No. 104 did not have a material effect on its financial position or results of operations.

Explanation of Use of Non−GAAP Financial Results

In addition to our audited financial results in accordance with United States generally accepted accounting principles (GAAP), to assist investors in light of the restatements for prior periods, we may on occasion provide certain non−GAAP financial results as an alternative means to explain our periodic results. The non−GAAP financial results typically may exclude non−cash or one−time charges or benefits.

Our management uses the non−GAAP financial results as an alternative means for assessing internally our quarterly operations. By excluding non−cash charges such as stock−based compensation, amortization of goodwill and purchased intangible assets, write−off of goodwill and purchased intangible assets and in−process research and development expenses, our management can evaluate our operations excluding these non−cash charges and can compare its results on a more consistent basis to the results of other companies in our industry. By excluding one−time charges such as restructuring charges (benefits) and inventory write−offs, our management can compare our ongoing operations to prior quarters where such items may be materially different and to ongoing operations of other companies in our industry who may have materially different one−time charges. Even though our management recognizes that non−GAAP financial results are not a substitute for GAAP results, non−GAAP measures are helpful in assisting our management in understanding and managing our business.

Our management believes that the non−GAAP financial results may also provide useful information to investors. Non−GAAP results may also allow investors and analysts to more readily compare our operations to prior financial results and to the financial results of other companies in the industry who similarly provide non−GAAP results to investors and analysts. Investors may seek to evaluate our business performance and the performance of our competitors as they relate to cash. Excluding one−time and non−cash charges may assist investors in this evaluation and comparisons.

We intend to continue to assess the potential value of reporting non−GAAP results consistent with applicable rules and regulations.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks described below before buying our common stock. If any of the following risks actually occurs, the trading price of our common stock could decline and you may lose all or part of your investment.

If we are not current in our SEC filings, we will face several adverse consequences.

NASDAQ has notified us that we must timely file all periodic reports with the SEC and NASDAQ for all reporting periods ending on or before June 30, 2005. Until we file our Form 10−Q for the quarter ended March 31, 2004, or if we are unable to remain current in our financial filings, we will not be able to have a registration statement under the Securities Act of 1933, covering a public offering of securities, declared effective by the SEC, and we will not be able to make offerings pursuant to existing registration statements (including registration statements on Form S−8 covering employee stock plans), or pursuant to certain "private placement" rules of the SEC under Regulation D, to any purchasers not qualifying as "accredited investors." In addition, our affiliates will not be able to sell our securities pursuant to Rule 144 under the Securities Act until the Form 10−Q for the quarter ended March 31, 2004 is filed. Finally, we will not be eligible to use a "short form" registration statement on Form S−3 for a period of 12 months after the time we become current in our filings. These restrictions may impair our ability to raise funds in the public markets, should we desire to do so, and to attract and retain key employees.

Our common stock may be delisted from the NASDAQ National Market and transferred to the National Quotation Service Bureau ("Pink Sheets"), which may, among other things, reduce the price of our common stock and the levels of liquidity available to our stockholders.

If we fail to keep current in our SEC filings, our common stock may be delisted from the NASDAQ National Market and subsequently would trade on the Pink Sheets. The trading of our common stock on the Pink Sheets may reduce the price of our common stock and the levels of liquidity available to our stockholders. In addition, the trading of our common stock on the Pink Sheets will materially adversely affect our access to the capital markets, and the limited liquidity and reduced price of our common stock could materially adversely affect our ability to raise capital through alternative financing sources on terms acceptable to us or at all. Stocks that trade on the Pink Sheets are no longer eligible for margin loans, and a company trading on the Pink Sheets cannot avail itself of federal preemption of state securities or "blue sky" laws, which adds substantial compliance costs to securities issuances, including pursuant to employee option plans, stock purchase plans and private or public offerings of securities. Our delisting from the NASDAQ National Market and transfer to the Pink Sheets may also result in other negative implications, including the potential loss of confidence by suppliers, customers and employees, the loss of institutional investor interest and fewer business development opportunities.

We have identified material weaknesses in our controls and procedures, which, if not remedied effectively, could seriously harm our business.

Management and our independent auditors have concluded that our controls and procedures had material weaknesses as of December 31, 2003. We have commenced the design and implementation of new and enhanced controls and procedures to address those material weaknesses. Our inability to remedy such material weaknesses promptly and effectively could have a material adverse effect on our business, results of operations and financial condition, as well as impair our ability to meet our quarterly and annual reporting requirements in a timely manner. While we are completing the design and implementation of our controls environment, there remains risk that the transitional controls on which we currently rely will fail to be sufficiently effective. In addition, even if we are successful in

strengthening our controls and procedures, such controls and procedures may not be adequate to prevent or identify irregularities or ensure the accuracy of our financial statements or SEC reporting.

Failure or circumvention of our controls and procedures could seriously harm our business.

We are making significant changes in our internal controls and our disclosure controls and procedures. Any system of controls, however well designed and operated, is based in part on certain assumptions and can provide only reasonable, and not absolute, assurances that the objectives of the system are met. The failure or circumvention of our controls, policies and procedures could have a material adverse effect on our business, results of operations and financial condition.

If we fail to meet the requirements of new regulations regarding the effectiveness of internal control over financial reporting, our financial reporting and business will be negatively affected.

Pursuant to new SEC rules under the Sarbanes−Oxley Act of 2002, we are required to include in our future Form 10−K filings a report by our management as to the effectiveness of our internal control over financial reporting. Beginning with our Form 10−K for 2004, our independent auditors will be required to attest to and report on the evaluation by management. We have implemented a number of changes designed to improve our internal control over financial reporting, and we anticipate making further changes to improve them, some of which may result in higher future operating expenses and capital expenditures. If we fail to strengthen our internal control over financial reporting, or receive an adverse opinion from our auditors as to the adequacy of our internal control over financial reporting, our ability to manage our business may be impaired, errors may occur or fail to be identified, and our financial condition could be harmed.

Our business has been adversely affected by developments in the telecommunications industry and these developments may continue to affect our revenues and operating results.

From our inception through the year 2000, the telecommunications market experienced rapid growth spurred by a number of factors, including deregulation in the industry, entry of a large number of new emerging service providers, growth in data traffic and the availability of significant capital from the financial markets. Commencing in 2001 and continuing in 2002 and 2003, the telecommunications industry experienced a reversal of some of these trends, marked by dramatic reductions in capital expenditures, financial difficulties, and, in some cases, bankruptcies experienced by service providers. These conditions caused a substantial, unexpected reduction in demand for telecommunications equipment, including our products.

We expect the developments described above to continue to affect our business in the following manner:

- our ability to accurately forecast revenue and plan our business is diminished;
- our revenues could be unexpectedly reduced; and
- we may incur losses because a high percentage of our operating expenses are expected to continue to be fixed in the short−term.

Our business, operating results and financial condition could be materially and adversely affected by any one or a combination of the above.

We expect that a majority of our revenues will be generated from a limited number of customers and we will not be successful if we do not grow our customer base.

To date, we have shipped our products to a limited number of customers. We expect that in the foreseeable future, the majority of our revenues will continue to depend on sales of our products to a

limited number of customers. Four, one and three customers each contributed more than 10% of our revenues for the 2003, 2002 and 2001 fiscal years, which represented an aggregate of 57%, 42% and 60% of total revenues.

Our future success will depend on our ability to attract additional customers beyond our current limited number. The growth of our customer base could be adversely affected by:

- customer unwillingness to implement our new voice infrastructure products or renew contracts as they expire;
- potential customer concerns with selecting an emerging telecommunications equipment vendor;
- delays or difficulties that we may incur in completing the development and introduction of our planned products or product enhancements;
- further deterioration in the general financial condition of service providers, including additional bankruptcies, or inability to raise capital;
- new product introductions by our competitors;
- failure of our products to perform as expected; or
- difficulties we may incur in meeting customers' delivery requirements.

The loss of any of our significant customers or any substantial reduction in orders or contractual commitments from these customers could materially adversely affect our financial condition and results of operations. If we do not expand our customer base to include additional customers that deploy our products in operational commercial networks, our business, operating results and financial condition could be materially and adversely affected.

The market for voice infrastructure products for the new public network is new and evolving and our business will suffer if it does not develop as we expect.

The market for our products continues to evolve. In particular, wireless, cable and broadband access networks are emerging to become important markets for our products. Packet−based technology may not become widely accepted as a platform for voice and a viable market for our products may not be sustainable. If this market does not develop, or develops more slowly than we expect, we may not be able to sell our products in significant volume.

If we do not anticipate and meet specific customer requirements or if our products do not interoperate with our customers' existing networks, we may not retain current customers or attract new customers.

To achieve market acceptance for our products, we must effectively anticipate, and adapt in a timely manner to, customer requirements and offer products and services that meet changing customer demands. Prospective customers may require product features and capabilities that our current products do not have. The introduction of new or enhanced products also requires that we carefully manage the transition from older products in order to minimize disruption in customer ordering patterns and ensure that adequate supplies of new products can be delivered to meet anticipated customer demand. If we fail to develop products and offer services that satisfy customer requirements, or to effectively manage the transition from older products, our ability to create or increase demand for our products would be seriously harmed and we may lose current and prospective customers.

Many of our customers will require that our products be designed to interface with their existing networks, each of which may have different specifications. Issues caused by an unanticipated lack of interoperability may result in significant warranty, support and repair costs, divert the attention of our engineering personnel from our hardware and software development efforts and cause significant customer relations problems. If our products do not interoperate with those of our customers'

networks, installations could be delayed or orders for our products could be cancelled, which would seriously harm our gross margins and result in loss of revenues or customers.

Our large customers have substantial negotiating leverage, which may require that we agree to terms and conditions that may have an adverse effect on our business.

Large telecommunications providers have substantial purchasing power and leverage negotiating contractual arrangements with us. These customers may require us to develop additional features and require penalties for failure to deliver such features. As we seek to sell more products to this class of customer, we may be required to agree to such terms and conditions, which may affect the timing of revenue recognition and amount of deferred revenues and may have an adverse effect on our business and financial condition.

We may face risks associated with our international expansion that could impair our ability to grow our revenues abroad.

International revenues, primarily attributable to Asia and Europe, were 21% of our revenues for fiscal 2003, and we intend to continue to expand our sales into international markets. This expansion will require significant management attention and financial resources to successfully develop direct and indirect international sales and support channels. In addition, we may not be able to develop international market demand for our products, which could impair our ability to grow our revenues. We have limited experience marketing, distributing and supporting our products internationally and, to do so, we expect that we will need to develop versions of our products that comply with local standards. Furthermore, international operations are subject to other inherent risks, including:

- greater difficulty collecting accounts receivable and longer collection periods;
- difficulties and costs of staffing and managing international operations;
- the impact of differing technical standards outside the United States;
- the impact of recessions in economies outside the United States;
- unexpected changes in regulatory requirements and currency exchange rates;
- certification requirements;
- reduced protection for intellectual property rights in some countries;
- potentially adverse tax consequences; and
- political and economic instability.

We may not become profitable.

We have incurred significant losses since inception and, as of December 31, 2003, had an accumulated deficit of $808.6 million. We have not achieved profitability on an annual basis and may incur additional net losses in future quarters and years. Our revenues may not grow and we may never generate sufficient revenues to sustain profitability.

The unpredictability of our quarterly results may adversely affect the trading price of our common stock.

Our revenues and operating results may vary significantly from quarter to quarter due to a number of factors, many of which are outside of our control and any of which may cause our stock price to fluctuate. Generally, purchases by service providers of telecommunications equipment from

manufacturers have been unpredictable and clustered, rather than steady, as the providers build out their networks. The primary factors that may affect our revenues and results include the following:

- fluctuation in demand for our voice infrastructure products and the timing and size of customer orders;
- the cancellation or deferral of existing customer orders or the renegotiation of existing contractual commitments;
- the failure of certain of our customers to successfully and timely reorganize their operations, including emerging from bankruptcy;
- the length and variability of the sales cycle for our products;
- the timing of revenue recognition and amount of deferred revenues;
- new product introductions and enhancements by our competitors and us;
- changes in our pricing policies, the pricing policies of our competitors and the prices of the components of our products;
- our ability to develop, introduce and ship new products and product enhancements that meet customer requirements in a timely manner;
- the mix of product configurations sold;
- our ability to obtain sufficient supplies of sole or limited source components;
- our ability to attain and maintain production volumes and quality levels for our products;
- costs related to acquisitions of complementary products, technologies or businesses;
- general economic conditions, as well as those specific to the telecommunications, networking and related industries; and
- the application of complex revenue recognition accounting rules to our customer arrangements.

As with other telecommunications product suppliers, we may recognize a substantial portion of our revenue in a given quarter from sales booked and shipped in the last weeks of that quarter. As a result, delays in customer orders may result in delays in shipments and recognition of revenue beyond the end of a given quarter.

A significant portion of our operating expenses is fixed in the short−term. If revenues for a particular quarter are below expectations, we may not be able to reduce operating expenses proportionally for the quarter. Any such revenue shortfall would, therefore, have a significant effect on our operating results for the quarter.

We believe that quarter−to−quarter comparisons of our operating results are not a good indication of our future performance. It is likely that in some future quarters, our operating results may be below the expectations of public market analysts and investors, which may adversely affect our stock price.

We are entirely dependent upon our voice infrastructure products and our future revenues depend upon their commercial success.

Our future growth depends upon the commercial success of our voice infrastructure products. We intend to develop and introduce new products and enhancements to existing products in the future. We may not successfully complete the development or introduction of these products. If our target customers do not adopt, purchase and successfully deploy our current or planned products, our revenues will not grow.

If we do not respond rapidly to technological changes or to changes in industry standards, our products could become obsolete.

The market for packet voice infrastructure products is likely to be characterized by rapid technological change and frequent new product introductions. We may be unable to respond quickly or effectively to these developments. We may experience difficulties with software development, hardware design, manufacturing or marketing that could delay or prevent our development, introduction or marketing of new products and enhancements. The introduction of new products by our competitors, the market acceptance of products based on new or alternative technologies or the emergence of new industry standards could render our existing or future products obsolete. If the standards adopted are different from those that we have chosen to support, market acceptance of our products may be significantly reduced or delayed. If our products become technologically obsolete, we may be unable to sell our products in the marketplace and generate revenues.

If we fail to compete successfully, our ability to increase our revenues or achieve profitability will be impaired.

Competition in the telecommunications market is intense. This market has historically been dominated by large companies, such as Lucent Technologies, Nortel Networks and Siemens, all of which are our direct competitors. We also face competition from other large telecommunications and networking companies, including Cisco Systems, some of which have entered our market by acquiring companies that design competing products. Because this market is rapidly evolving, additional competitors with significant financial resources may enter these markets and further intensify competition.

Many of our current and potential competitors have significantly greater selling and marketing, technical, manufacturing, financial and other resources. Further, some of our competitors sell significant amounts of other products to our current and prospective customers. Our competitors' broad product portfolios, coupled with already existing relationships, may cause our customers to buy our competitors' products or harm our ability to attract new customers.

To compete effectively, we must deliver innovative products that:

- provide extremely high reliability and voice quality;
- scale easily and efficiently;
- interoperate with existing network designs and other vendors' equipment;
- provide effective network management;
- are accompanied by comprehensive customer support and professional services; and
- provide a cost−effective and space efficient solution for service providers.

If we are unable to compete successfully against our current and future competitors, we could experience price reductions, order cancellations, loss of customers and revenues and reduced gross profit margins.

Because our products are sophisticated and designed to be deployed in complex environments, they may have errors or defects that we find only after full deployment, which could seriously harm our business.

Our products are sophisticated and are designed to be deployed in large and complex networks. Because of the nature of our products, they can only be fully tested when substantially deployed in very large networks with high volumes of traffic. Some of our customers have only recently begun to commercially deploy our products and they may discover errors or defects in the software or hardware,

or the products may not operate as expected. If we are unable to fix errors or other performance problems that may be identified after full deployment of our products, we could experience:

- loss of, or delay in, revenues;
- loss of customers and market share;
- a failure to attract new customers or achieve market acceptance for our products;
- increased service, support and warranty costs and a diversion of development resources; and
- costly and time−consuming legal actions by our customers.

Because our products are deployed in large, complex networks around the world, failure to establish a support infrastructure and maintain required support levels could seriously harm our business.

Our products are deployed in large and complex networks around the world. Our customers expect us to establish a support infrastructure and maintain demanding support standards to ensure that their networks maintain high levels of availability and performance. To support the continued growth of our business, our support organization will need to provide service and support at a high level throughout the world. If we are unable to provide the expected level of support and service to our customers, we could experience:

- loss of customers and market share;
- a failure to attract new customers in new geographies;
- increased service, support and warranty costs and a diversion of development resources; and
- network performance penalties.

We have experienced changes in our senior management, which could affect our business and operations.

Since April 2004, we have made significant changes in our senior management team. We have hired a President and Chief Operating Officer and a new Vice President of Finance, Corporate Controller and Chief Accounting Officer. We presently are in the process of recruiting a new Chief Financial Officer. Because of these recent changes, our management team may not be able to work together effectively to successfully develop and implement our business strategies and financial operations. In addition, management will need to devote significant attention and resources to preserve and strengthen relationships with employees, customers and the investor community. If our new management team is unable to achieve these goals, our ability to grow our business and successfully meet operational challenges could be impaired.

If we fail to hire and retain needed personnel, the implementation of our business plan could slow or our future growth could halt.

Our business depends upon highly skilled engineering, sales, marketing and customer support personnel. Any failure to hire or retain needed qualified personnel could impair our growth. Our future success depends upon the continued services of our executive officers who have critical industry experience and relationships that we rely on to implement our business plan. None of our officers or key employees is bound by an employment agreement for any specific term. The loss of the services of any of our officers or key employees could delay the development and introduction of, and negatively impact our ability to sell, our products.

If we are subject to employment claims, we could incur substantial costs in defending ourselves.

We may become subject to employment claims in connection with employee terminations. In addition, companies in our industry whose employees accept positions with competitors frequently claim that their competitors have engaged in unfair hiring practices. These claims may result in material litigation. We could incur substantial costs defending ourselves or our employees against those claims, regardless of their merits. In addition, defending ourselves from those types of claims could divert our management's attention from our operations. If we are found liable in connection with any employment claim, we may incur significant costs that could adversely impact our financial condition and results of operations.

We depend upon contract manufacturers and any disruption in these relationships may cause us to fail to meet the demands of our customers and damage our customer relationships.

We rely on a small number of contract manufacturers to manufacture our products according to our specifications and to fill orders on a timely basis. Our contract manufacturers provide comprehensive manufacturing services, including assembly of our products and procurement of materials. Each of our contract manufacturers also builds products for other companies and may not always have sufficient quantities of inventory available to fill our orders or may not allocate their internal resources to fill these orders on a timely basis. We do not have long−term supply contracts with our manufacturers and they are not required to manufacture products for any specified period. We do not have internal manufacturing capabilities to meet our customers' demands. Qualifying a new contract manufacturer and commencing commercial scale production is expensive and time consuming and could result in a significant interruption in the supply of our products. If a change in contract manufacturers results in delays in our fulfillment of customer orders or if a contract manufacturer fails to make timely delivery of orders, we may lose revenues and suffer damage to our customer relationships.

We and our contract manufacturers rely on single or limited sources for supply of some components of our products and if we fail to adequately predict our manufacturing requirements or if our supply of any of these components is disrupted, we will be unable to ship our products.

We and our contract manufacturers currently purchase several key components of our products, including commercial digital signal processors, from single or limited sources. We purchase these components on a purchase order basis. If we overestimate our component requirements, we could have excess inventory, which would increase our costs. If we underestimate our requirements, we may not have an adequate supply, which could interrupt manufacturing of our products and result in delays in shipments and revenues.

We currently do not have long−term supply contracts with our component suppliers and they are not required to supply us with products for any specified periods, in any specified quantities or at any set price, except as may be specified in a particular purchase order. In the event of a disruption or delay in supply, or inability to obtain products, we may not be able to develop an alternate source in a timely manner or at favorable prices, or at all. A failure to find acceptable alternative sources could hurt our ability to deliver high−quality products to our customers and negatively affect our operating margins. In addition, reliance on our suppliers exposes us to potential supplier production difficulties or quality variations. Our customers rely upon our ability to meet committed delivery dates, and any disruption in the supply of key components would seriously adversely affect our ability to meet these dates and could result in legal action by our customers, loss of customers or harm to our ability to attract new customers.

If we are not able to obtain necessary licenses of third party technology at acceptable prices, or at all, our products could become obsolete.

We have incorporated third party licensed technology into our current products. From time to time, we may be required to license additional technology from third parties to develop new products or product enhancements. Third party licenses may not be available or continue to be available to us on commercially reasonable terms. The inability to maintain or re−license any third party licenses required in our current products or to obtain any new third party licenses to develop new products and product enhancements could require us to obtain substitute technology of lower quality or performance standards or at greater cost, and delay or prevent us from making these products or enhancements, any of which could seriously harm the competitiveness of our products.

Our ability to compete and our business could be jeopardized if we are unable to protect our intellectual property or become subject to intellectual property rights claims, which could require us to incur significant costs.

We rely on a combination of patent, copyright, trademark and trade secret laws and restrictions on disclosure to protect our intellectual property rights. Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy or otherwise obtain and use our products or technology. Monitoring unauthorized use of our products is difficult and we cannot be certain that the steps we have taken will prevent unauthorized use of our technology, particularly in foreign countries where the laws may not protect our proprietary rights as fully as in the United States. If competitors are able to use our technology, our ability to compete effectively could be harmed.

In addition, we have received inquiries from other patent holders and may become subject to claims that we infringe their intellectual property rights. Any parties asserting that our products infringe upon their proprietary rights could force us to license their patents for substantial royalty payments or to defend ourselves and possibly our customers or contract manufacturers in litigation. These claims and any resulting licensing arrangement or lawsuit, if successful, could subject us to significant royalty payments or liability for damages and invalidation of our proprietary rights. Any potential intellectual property litigation also could force us to do one or more of the following:

- stop selling, incorporating or using our products that use the challenged intellectual property;
- obtain from the owner of the infringed intellectual property right a license to sell or use the relevant technology, which license may not be available on reasonable terms, or at all; or
- redesign those products that use any allegedly infringing technology.

Any lawsuits regarding intellectual property rights, regardless of their success, would be time−consuming, expensive to resolve and would divert our management's time and attention.

Any investments or acquisitions we make could disrupt our business and seriously harm our financial condition.

Although we have no current plans or agreements to do so, we intend to consider investing in, or acquiring, complementary products, technologies or businesses. In the event of future investments or acquisitions, we could:

- issue stock that would dilute our current stockholders' percentage ownership;
- incur debt or assume liabilities;
- incur significant impairment charges related to the write−off of goodwill and purchased intangible assets;
- incur significant amortization expenses related to purchased intangible assets; or

- incur large and immediate write−offs for in−process research and development and stock based compensation.

Our integration of any acquired products, technologies or businesses will also involve numerous risks, including:

- problems and unanticipated costs associated with combining the purchased products, technologies or businesses;
- diversion of management's attention from our core business;
- adverse effects on existing business relationships with suppliers and customers;
- risks associated with entering markets in which we have limited or no prior experience; and
- potential loss of key employees, particularly those of the acquired organizations.

We may be unable to successfully integrate any products, technologies, businesses or personnel that we might acquire in the future without significant costs or disruption to our business.

We face risks related to securities litigation and investigations that could have a material adverse effect on our business, financial condition and results of operations.

We have been named as a defendant in a number of securities class action and derivative lawsuits and are the subject of a formal investigation initiated by the SEC. We are generally obliged, to the extent permitted by law, to indemnify our current and former directors and officers who are named as defendants in some of these lawsuits. Defending against existing and potential litigation relating to the restatement of our consolidated financial statements will likely require significant attention and resources of management. Regardless of the outcome, such litigation and investigation will result in significant legal expenses and may also negatively affect our relationships with our customers and our employees. If our defenses are ultimately unsuccessful, or if we are unable to achieve a favorable settlement, we could be liable for large damage awards that could have a material adverse effect on our business, results of operations and financial condition.

The limitations of our director and officer liability insurance may materially harm our business and financial condition.

Our director and officer liability insurance policies provide only limited liability protection relating to the securities class action and derivative lawsuits against us and certain of our officers and directors. If these policies do not adequately cover expenses and certain liabilities relating to these lawsuits, our financial condition could be materially harmed. The facts underlying the lawsuits and SEC investigation have made director and officer liability insurance extremely expensive for us, and may make this insurance coverage unavailable for us in the future. Increased premiums could materially harm our financial results in future periods. The inability to obtain this coverage due to its unavailability or prohibitively expensive premiums would make it more difficult to retain and attract officers and directors and expose us to potentially self−funding any potential future liabilities ordinarily mitigated by director and officer liability insurance.

Management's time and effort expected to be spent to respond to the SEC investigation may adversely affect our business and our results of operations.

We have received a formal order of private investigation from the SEC. Our management will spend considerable time and effort cooperating with the SEC in its investigation. The significant time and effort expected to be spent on this SEC investigation may adversely affect our business, results of operations and financial condition. We may incur substantial costs in connection with the investigation including fines and significant legal expenses.

We may seek to raise additional capital in the future, which may not be available to us, and if it is available, may dilute the ownership of our common stock.

In April and September 2003, we completed public offerings of 20,000,000 and 17,000,000 shares of our common stock resulting in the dilution of our existing investors' percentage ownership of our common stock. In the future, we may seek to raise additional funds through public or private debt or equity financings in order to:

- fund ongoing operations and capital requirements;
- take advantage of opportunities, including more rapid expansion or acquisition of complementary products, technologies or businesses;
- develop new products; or
- respond to competitive pressures.

Any additional capital raised through the sale of convertible debt or equity may further dilute an investor's percentage ownership of our common stock. Furthermore, additional financings may not be available on terms favorable to us, or at all. A failure to obtain additional funding could prevent us from making expenditures that may be required to grow or maintain our operations.

Our stock price has been and may continue to be volatile.

The market for technology stocks has been and will likely continue to be extremely volatile. The following factors could cause the market price of our common stock to fluctuate significantly:

- the addition or loss of any major customer;
- changes in the financial condition or anticipated capital expenditure purchases of any existing or potential major customer;
- quarterly variations in our operating results;
- changes in financial estimates by securities analysts;
- speculation in the press or investment community;
- announcements by us or our competitors of significant contracts, new products or acquisitions, distribution partnerships, joint ventures or capital commitments;
- sales of common stock or other securities by us or by our stockholders in the future;
- securities and other litigation;
- announcement of a stock split, reverse stock split, stock dividend or similar event;
- economic conditions for the telecommunications, networking and related industries; and
- worldwide economic instability.

Sales of a substantial amount of our common stock in the future could cause our stock price to fall.

Some stockholders who acquired shares prior to our IPO or in connection with our acquisition of TTI hold a substantial number of shares of our common stock that have not yet been sold in the public market. Further, additional shares may become available for sale upon the conversion or redemption of our convertible subordinated note. Sales of a substantial number of shares of our common stock within a short period of time in the future could impair our ability to raise capital through the sale of additional debt or stock and/or cause our stock price to fall.

Provisions of our charter documents and Delaware law may have anti−takeover effects that could prevent a change of control.

Provisions of our amended and restated certificate of incorporation, our amended and restated by−laws and Delaware law could make it more difficult for a third party to acquire us, even if doing so would be beneficial to our stockholders.

SPECIAL NOTE REGARDING FORWARD−LOOKING STATEMENTS

This report contains forward−looking statements that involve substantial risks and uncertainties. In some cases you can identify these statements by forward−looking words such as "anticipate," "believe," "could," "estimate," "expect," "intend," "may," "should," "will," and "would" or similar words. You should read statements that contain these words carefully because they discuss future expectations, contain projections of future results of operations or of financial position or state other "forward−looking" information. The important factors listed above in the section captioned "Risk Factors," as well as any cautionary language in this report, provide examples of risks, uncertainties and events that may cause the actual results to differ materially from the expectations described in these forward−looking statements. You should be aware that the occurrence of the events described in the risk factors and elsewhere in this report could have a material adverse effect on the business, results of operations and financial position of Sonus.

Any forward−looking statements in this report are not guarantees of future performances, and actual results, developments and business decisions may differ from those anticipated by such forward−looking statements, possibly materially. Sonus disclaims any duty to update any forward−looking statements, all of which are expressly qualified by the statements in this section.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The consolidated financial statements of Sonus Networks, Inc. are filed as a part of this Amendment No. 1 to Annual Report on Form 10−K/A beginning on page F−1.

ITEM 9A. CONTROLS AND PROCEDURES

Our current management, with the participation of our principal executive officer and co−principal financial officers, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 240.13a−15(e) and 240.15d−15(e) of the Securities Exchange Act of 1934) as of December 31, 2003, which included an evaluation of disclosure controls and procedures applicable to the period covered by the filing of this periodic report. As noted below, we have identified material weaknesses in our internal controls and procedures, as they existed as of December 31, 2003.

As more fully described elsewhere in this Form 10−K/A, we postponed the release of our financial results for the quarter and year ended December 31, 2003 pending the completion of the audit of our 2003 financial statements. On February 11, 2004, in connection with this year−end audit, we announced that we and our independent auditors had identified certain issues, practices and actions of certain employees relating to both the timing of revenue recognized from certain customer transactions and to certain other financial statement accounts, which may affect our 2003 financial statements and possibly financial statements for prior periods. Additionally, we announced that in response to the issues identified we were performing a detailed review of the revenue for the time periods in which revenue was recorded, and of certain other financial statement accounts, and that the audit committee of our board of directors was conducting an independent investigation with the assistance of independent legal and accounting advisors. During the course of our review and the audit committee's investigation, we determined that the accounting with respect to certain prior period transactions required adjustment. As a result, we have restated our consolidated financial statements for the years ended December 31, 2002 and 2001 and for the nine months ended September 30, 2003.

In connection with our restatement, we and Ernst & Young LLP, our independent auditors, identified and reported to our audit committee significant internal control matters that collectively constitute "material weaknesses." These internal control matters, any one or more of which may individually or together constitute a material weakness, include: insufficient contract review and documentation; inadequate supervision and review within the finance and accounting department; inadequate segregation of duties; insufficient supporting documentation for and review of account reconciliations; lack of adequate controls over cash receipts; lack of adequate technical accounting expertise; insufficient equity review procedures and documentation; flawed foundations for accounting estimates; and inadequate quarterly and year−end financial statement close and review procedures.

During 2004, through the filing date of this report, we have begun to implement changes to our infrastructure and related processes to address such issues. These measures include the following:

- We have hired a President and Chief Operating Officer and a new Vice President of Finance, Corporate Controller and Chief Accounting Officer as well as other personnel into our finance and accounting organization who have expertise in financial controls and reporting, to improve the overall quality and level of experience in our finance and accounting organization. We are actively recruiting other senior level members of the finance and accounting organization, including a Chief Financial Officer and Director of Internal Audit.

- We have made, and will continue to make, changes in our finance and accounting organization to provide clearer segregation of responsibilities and supervision with regard to, among others, account reconciliations and documentation supporting our quarterly and annual financial statements.

- We have a Code of Business Conduct and Ethics. We terminated two employees for breach of the code, including the individual who then was our controller. We also have communicated to senior management and other key personnel the importance of these requirements and will be conducting additional training.

- We have a formal reporting system to enable employees to identify potential concerns or ethical issues on an anonymous basis. We will be communicating to employees, from time to time, about the availability of this system and will be conducting training on this system.

- We are implementing an enhanced quarterly financial review process, which will include a formal closing meeting each quarter chaired by the chief accounting officer and attended by a cross−section of senior financial management.

- We are establishing a cross−functional bids and proposals group to manage customer contract negotiation, review and implementation and assess related revenue recognition implications.

- We have initiated additional training of our sales and marketing organizations regarding revenue recognition rules and best practices.

With the assistance of our advisors, we plan to take additional steps to strengthen our internal controls, including expansion of our transaction approval procedures to include the involvement of sales and service personnel and the implementation of a formal contract review procedure; implementation of processes to improve communication among our various functional groups, which include sales, manufacturing, customer support, engineering, accounting, and legal, during the contract negotiation and implementation phases; implementation of an internal audit function; and improved operating controls and reporting processes.

Based on the evaluation of the effectiveness of our disclosure controls and procedures as of December 31, 2003, which included an evaluation of the effectiveness of our disclosure controls and procedures applicable to the periods covered by the filing of this periodic report, and subject to the information set forth in this Item 9A, our principal executive officer and co−principal financial officers have concluded that our disclosure controls and procedures were inadequate, as further described in this Item 9A. There was no change in our internal control over financial reporting (as defined in Rules 240.13a−15(f) and 240.15d−15(f) of the Exchange Act) during the fiscal quarter ended December 31, 2003 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting. Subsequent to December 31, 2003, and up to the filing date of this report, we implemented a detailed reconstruction of the accounting records in support of the financial statements contained herein utilizing experts in accounting, appraisals, and other consultants under the direction of new financial management.

Based on the changes and improvements made since January 1, 2004, our management, including our principal executive officer and co−principal financial officers, believes that as of the date of this filing, our disclosure controls and procedures (1) were designed to ensure that material information relating to our company, including our consolidated subsidiaries, is made known to our principal executive officer and co−principal financial officers by others within those entities, and (2) given the late filing of this Amendment No. 1 on Form 10−K/A and our Quarterly Report on Form 10−Q for the quarter ended March 31, 2004, are not yet effective but have improved since December 31, 2003 in providing reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. We currently are designing and implementing a new controls environment to address the material weaknesses described above. While this design and implementation phase is underway, we are relying on extensive manual procedures, including regular reviews and the significant utilization of outside accounting professionals, to assist us with meeting the objectives otherwise fulfilled by an effective controls environment. We expect to establish and implement a system and policy−based set of controls. While we are completing the design and implementation of our controls environment, there remains risk that the transitional controls on which we are currently relying will fail to be sufficiently effective. We also note, however, that a control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system

must reflect the fact that there are resource constraints. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. These inherent limitations include the realities that judgments in decision−making can be faulty, and breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the controls. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Over time, our control systems as we develop them may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost−effective control system, misstatements due to error or fraud may occur and not be detected.

The certifications of our principal executive officer and the co−principal financial officers required in accordance with Section 302 of the Sarbanes−Oxley Act of 2002 are attached as exhibits to this Amendment No. 1 on Form 10−K/A. The disclosures set forth in this Item 9A contain information concerning the evaluation of our disclosure controls and procedures, and changes in internal control over financial reporting, referred to in paragraph 4 of the certifications. This Item 9A should be read in conjunction with the officer certifications for a more complete understanding of the topics presented.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The following table sets forth our executive officers and directors, their respective ages and positions as of May 31, 2004:

Name	Age	Position
Hassan M. Ahmed	46	Chief Executive Officer and Chairman of the Board of Directors
Rubin Gruber	59	Chairman Emeritus of the Board of Directors and Director
Edward N. Harris	42	Vice President of Manufacturing
Michael G. Hluchyj	49	Chief Technology Officer, Vice President and Secretary
Paul R. Jones	54	Vice President of Engineering
Jeffrey Mayersohn	52	Vice President of Customer Support and Professional Services
Bradley T. Miller	42	Vice President of Finance, Corporate Controller and Chief Accounting Officer
Albert A. Notini	47	President, Chief Operating Officer and Director
John Michael O'Hara	37	Vice President of Marketing
Gary A. Rogers	48	Vice President of Worldwide Sales
Edward T. Anderson (1)	54	Director
Paul J. Ferri (1)(2)(3)	65	Director
Paul J. Severino (1)(2)	57	Director
H. Brian Thompson (3)	65	Director

(1) Member of audit committee.

(2) Member of compensation committee.

(3) Member of nominating committee.

Hassan M. Ahmed has been Chief Executive Officer and a member of our Board of Directors since November 1998 and Chairman of our Board of Directors since April 2004. From November 1998 to April 2004, he was also our President. From July 1998 to November 1998, Mr. Ahmed was Executive Vice President and General Manager of the Core Switching Division of Ascend Communications, Inc., a provider of wide area network switches and access data networking equipment, and from July 1997 until July 1998 was a Vice President and General Manager of the Core Switching Division. From June 1995 to July 1997, Mr. Ahmed was Chief Technology Officer and Vice President of Engineering for Cascade Communications Corp., a provider of wide area network switches. From 1993 until June 1995, Mr. Ahmed was a founder and President of WaveAccess, Inc., a supplier of wireless communications. Prior to that, he was an Associate Professor at Boston University, Engineering Manager at Analog Devices, a chip manufacturer, and director of VSLI Systems at Motorola Codex, a supplier of communications equipment. Mr. Ahmed holds a B.S. and an M.S. in engineering from Carleton University and a Ph.D. in engineering from Stanford University.

Rubin Gruber is one of our founders and has been a Director since November 1997 and Chairman Emeritus of our Board of Directors since April 2004. From November 1998 until April 2004, Mr. Gruber had been Chairman of the Board of Directors, and from November 1997 until November 1998, Mr. Gruber was our President. Before founding Sonus, Mr. Gruber was a founder of VideoServer, Inc., now Ezenia!, Inc., a manufacturer of videoconference network equipment, and from February 1992 until September 1996 served as Vice President of Business Development. Previously, Mr. Gruber was a founder and served as President of both Cambridge Telecommunications, Inc., a manufacturer of networking equipment, and Davox Corporation, a developer of terminals supporting voice and data applications, and served as a Senior Vice President of Bolt, Beranek and Newman Communications Corporation, a subsidiary of Bolt, Beranek and Newman, Inc., a manufacturer of data communications equipment. Mr. Gruber holds a B.Sc. in mathematics from McGill University and an M.A. in mathematics from Wayne State University.

Edward N. Harris has been our Vice President of Manufacturing since October 2002. From September 2000 to October 2002, Mr. Harris was our Director of Materials and Planning. From July 1999 to September 2000, Mr. Harris was Senior Supply Chain Manager for Lucent Technologies, Integrated Network Solutions, a provider of core switching products. He was previously employed by Ascend Communications prior to its acquisition by Lucent, as Supply Chain Manager from January 1998 to June 1999 and as Senior Buyer/Planner from June 1997 to December 1997, and with Cascade Communications prior to its acquisition by Ascend, as Senior Buyer/Planner from 1994 to June 1997. Prior to that, he worked in materials management at American Science & Engineering, a manufacturer of x−ray inspection equipment and at Analog Devices. Mr. Harris holds a B.S. from the University of New Hampshire.

Michael G. Hluchyj is one of our founders and has been our Chief Technology Officer and Vice President since November 1997. He also has been our Secretary since our inception, and was our President from August 1997 to November 1997, our Treasurer from inception until March 2000 and a Director from our inception until November 1998. From July 1994 until July 1997, he was Vice President and Chief Technology Officer at Summa Four, Inc., a supplier of switches for carrier networks. Previously, he was Director of Networking Research at Motorola Codex and on the technical staff at AT&T Bell Laboratories. Mr. Hluchyj holds a B.S. in engineering from the University of Massachusetts and an M.S. and a Ph.D. in engineering from the Massachusetts Institute of Technology.

Paul R. Jones has been our Vice President of Engineering since June 2000. From February 1997 until May 2000, he was Vice President of Engineering for Indus River Networks, Inc., a developer of virtual private network solutions. From December 1994 until February 1996, he was Chief Operating Officer at Isis Distribution Systems, a wholly owned subsidiary of Stratus Computers. From March 1990 until November 1994, he was Vice President of Engineering at Stratus Computers, Inc., a provider of fault tolerant computer systems and services. Previously, Mr. Jones held senior engineering

management positions at Stellar Computers, Inc. and Prime Computer, Inc. Mr. Jones holds an A.B. from Brown University and an M.S. in engineering from the University of Massachusetts.

Jeffrey Mayersohn has been our Vice President of Customer Support and Professional Services since July 1999. From March 1998 until July 1999, he was our Vice President of Carrier Relations. From June 1997 to March 1998, Mr. Mayersohn was a Senior Vice President at GTE Internetworking, an Internet service provider. From January 1995 to June 1997, he was with BBN Corporation, formerly Bolt, Beranek and Newman, Inc., and was a Vice President at the BBN Planet division, an Internet service provider. From 1978 to January 1995, he held a number of positions at Bolt, Beranek and Newman Communications Corporation, including Senior Vice President of Engineering, Senior Vice President responsible for U.S. Government Networks and Vice President of Professional Services. Mr. Mayersohn holds an A.B. in physics from Harvard College and an M.Phil. in physics from Yale University.

Bradley T. Miller has been our Vice President of Finance, Corporate Controller and Chief Accounting Officer since May 2004. From March 2000 through May 2004, Mr. Miller was with Sapient Corporation, an information technology and business consulting firm. Mr. Miller joined Sapient in March 2000 as Corporate Controller, and was appointed Vice President in August 2001 and Chief Accounting Officer in November 2002. From September 1999 until March 2000, Mr. Miller served as Vice President and Corporate Controller of JuniorNet Corporation, an Internet content provider, and from August 1996 to September 1999 was Director of Financial Reporting of Wang Global, a worldwide provider of network services. Mr. Miller previously was a member of the audit practice with Coopers & Lybrand where he earned his C.P.A. license. Mr. Miller has a B.A. from the College of William & Mary, and an M.B.A. from the University of New Hampshire.

Albert A. Notini has been our President and Chief Operating Officer since April 2004 and a Director since March 2003. Until becoming President and Chief Operating Officer in April 2004, Mr. Notini was also a member of the audit committee. Mr. Notini served as a Director and the Chief Financial Officer of Manufacturers Services Limited, a global electronics and supply chain services company, from October 2000 to March 2004. He joined Manufacturers Services Limited in May 2000 as Executive Vice President, Business Development and General Counsel and served in that capacity until October 2000. From January 1999 to June 1999, Mr. Notini was the Executive Vice President, Corporate Development and Administration and General Counsel of Wang Global, a worldwide provider of network services. Wang Global was acquired by Getronics NV in June 1999 and Mr. Notini served as Executive Vice President of Getronics until February 2000. He joined Wang Global in February 1994 as Senior Vice President and General Counsel. Prior to joining Wang Global Mr. Notini was a Senior Partner at Hale and Dorr LLP, a law firm. Mr. Notini has a B.A. from Boston College, an M.A. from Boston University and a J.D. from Boston College Law School. Mr. Notini also serves as a director of ePresence, Inc.

John Michael O'Hara has been our Vice President of Marketing since July 2002. From 1987 to March 2002, Mr. O'Hara held a number of positions at Nortel Networks Corporation, a communications technology provider. From March 2001 to March 2002, he served as Vice President of Marketing in Europe, the Middle East and Africa, from April 1999 to March 2001 was Vice President of Business Operations, from April 1997 to March 1999 was Executive Assistant to the President and, from January 1996 to March 1997 was Senior Manager of Order Management. Prior to that, he held a number of management positions including sales, operations and customer service with Nortel in the European region. He holds a degree in engineering from the Queens University of Belfast.

Gary A. Rogers has been our Vice President of Worldwide Sales since March 1999. From March 1999 to December 2000, Mr. Rogers was also our Vice President of Marketing. From February 1997 to March 1999, Mr. Rogers was Senior Vice President of Worldwide Sales and Operations at Security Dynamics, Inc., now RSA Security, Inc., a supplier of network security products.

Previously, he served at Bay Networks, Inc., as Vice President of International Sales from July 1996 to February 1997 and as Vice President of Europe, Middle East and Africa from 1994 until July 1996. Prior to that, he held sales and marketing positions with International Business Machines Corporation. Mr. Rogers holds a B.A. in mathematics from Dartmouth College and an M.B.A. from the University of Chicago.

Edward T. Anderson has been a Director since November 1997. Mr. Anderson has been managing general partner of North Bridge Venture Partners, a venture capital firm, since 1994. Previously, he was a general partner of ABS Ventures, the venture capital affiliate of Alex Brown & Sons. He has an M.F.A. from the University of Denver and an M.S. from Columbia University.

Paul J. Ferri has been a Director since November 1997. Mr. Ferri has been a general partner of Matrix Partners, a venture capital firm, since 1982. He also serves on the Board of Directors of Sycamore Networks, Inc. Mr. Ferri has a B.S. in engineering from Cornell University, an M.S. in engineering from Polytechnic Institute of New York and an M.B.A. from Columbia University.

Paul J. Severino has been a Director since March 1999. Mr. Severino is a private investor. From 1994 to October 1996, he was Chairman of Bay Networks, Inc. after its formation from the merger of Wellfleet Communications, Inc. and Synoptics Communications, Inc. Prior to that, he was a founder, President and Chief Executive Officer of Wellfleet Communications, Inc. He also serves on the Board of Directors of Media 100, Inc. Mr. Severino has a B.S. in engineering from Rensselaer Polytechnic Institute.

H. Brian Thompson has been a Director since October 2003. Mr. Thompson currently serves as chairman of the board of directors for Comsat International, an independent telecommunications operator with operations throughout Latin America. He also heads his own private equity investment and advisory firm, Universal Telecommunications, Inc. Mr. Thompson currently serves as a member of the board of directors of Bell Canada International, ArrayComm, Inc., Axcelis Technologies, Inc. and United Auto Group. He received his M.B.A. from Harvard's Graduate School of Business, and received an undergraduate degree in chemical engineering from the University of Massachusetts.

Code of Conduct

We have adopted a Code of Business Conduct and Ethics that applies to all executive officers, directors and employees of the company. The Code of Business Conduct and Ethics is attached as an exhibit to this Annual Report on Form 10−K and also can be found under the "Investor Relations" section of our website at www.sonusnet.com. We intend to satisfy the disclosure requirement under Item 10 of Form 8−K (or any successor provision thereto) regarding an amendment to, or waiver from, a provision of this Code of Business Conduct and Ethics with respect to our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions, by posting such information on our website, unless a Form 8−K is otherwise required by applicable rules of the NASDAQ National Market.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Securities Exchange Act of 1934 requires our executive officers, directors and persons who own more than 10% of the our common stock to file reports of ownership and changes in ownership with the SEC. Based solely on a review of the copies of reports furnished to us, we believe that during the year ended December 31, 2003, our directors, executive officers and greater than 10% shareholders complied with all Section 16(a) filing requirements, except that Mr. Notini was late in filing a Form 3 following his appointment as a director and reporting his initial grant of options to purchase shares of common stock under Form 4, Messrs. Ahmed, Gruber and Rogers were late in reporting gifts of shares on Form 5, and Messrs. Ahmed, Gruber, Hluchyj, Mayersohn, Nill and Rogers were late in reporting stock repurchases from an exchange fund on Form 4.

Audit Committee

The board of directors has an audit committee that operates under a charter that has been approved by the board. A current copy of the audit committee's charter is posted on the "Investor Relations" section of our website, www.sonusnet.com. The current members of the audit committee are Edward T. Anderson, Paul J. Ferri and Paul J. Severino.

The board of directors has determined that all of the members of the audit committee are independent as defined under the new rules of the NASDAQ Stock Market that become applicable to us on the earlier of the date of our 2004 Annual Meeting or October 31, 2004, including the independence requirements contemplated by Rule 10A−3 under the Exchange Act. In addition, all of the members of the audit committee are independent as defined by the rules of the NASDAQ Stock Market that apply to us until such date and otherwise satisfy NASDAQ's eligibility requirements for audit committee membership.

In 2003, the board of directors determined that Mr. Notini was an "audit committee financial expert" as defined in Item 401(h) of Regulation S K. Mr. Notini served as chair of the audit committee from March 2003 until April 2004, when he joined us as President and Chief Operating Officer. Mr. Notini was independent, as defined in the preceding paragraph, when he served on the audit committee. Presently we do not have an individual serving on the audit Committee who meets the requirements of an audit committee financial expert as a result of Mr. Notini becoming President and Chief Operating Officer. We are actively recruiting a new non−employee director to serve as chair of the audit committee and who will meet the requirements of an "audit committee financial expert."

ITEM 11. EXECUTIVE COMPENSATION

Director Compensation

We compensate directors in cash in the amount of $10,000 for service as chairman of a committee of the Board of Directors. Directors also are eligible to be reimbursed for reasonable out−of pocket expenses incurred in connection with attendance at Board or committee meetings.

Under our Amended and Restated 1997 Stock Incentive Plan (the Plan), non−employee directors also are eligible to receive stock option grants or restricted stock awards at the discretion of the Board of Directors or other administrator of the Plan. In March 2003, we granted an option to purchase 50,000 shares of our common stock to Mr. Notini upon his appointment to the Board of Directors, at an exercise price of $2.13 per share. In May 2003, we granted options to purchase 10,000 shares of our common stock to our non−employee directors, Messrs. Anderson, Ferri and Severino, under the Plan, each at an exercise price of $3.31 per share. In October 2003, we granted an option to purchase 50,000 shares of our common stock to Mr. Thompson upon his appointment to the Board of Directors, at an exercise price of $7.65 per share. Each of these options vests over a four−year period with 25% of the number of options vesting one year from the date of grant and monthly thereafter at the rate of 2.0833% for each month of service completed by the director.

Summary of Executive Compensation

The following table sets forth, for the years ended December 31, 2003, 2002 and 2001, the compensation earned by our Chief Executive Officer, and the other four most highly compensated executive officers who received combined annual salary and bonus in excess of $100,000 (the Named Executive Officers).

Summary Compensation Table

		Annual Compensation			Long−Term Compensation Awards	
Name and Current Principal Position	Year	Salary	Bonus	Other Annual Compensation	Restricted Stock Awards(4)	Securities Underlying Options/SARs
Hassan M. Ahmed	2003	$ 153,125	$ 75,000	$ —	—	2,000,000
Chief Executive Officer and Chairman of the Board of	2002	113,021	48,400	7,917(2)		—
Directors	2001	175,000	75,000	38,000(2)		640,000
Rubin Gruber	2003	153,125	—	—	—	430,000
Chairman Emeritus of the Board of Directors	2002	113,021				—
	2001	175,000				320,000
Paul R. Jones	2003	170,625	—	—	—	530,000
Vice President of Engineering	2002	162,604				—
	2001	175,000				70,000
John M. O'Hara	2003	170,500	—	—	—	100,000
Vice President of Marketing	2002	70,247(1)				220,000
	2001	—				—
Gary A. Rogers	2003	492,293(3)	—	—	—	430,000
Vice President of Worldwide Sales	2002	236,574(3)				—
	2001	213,702(3)				70,000

(1) Represents the total amount of compensation received in fiscal 2002 for the portion of the year during which he was one of our executive officers. Mr. O'Hara joined us in July 2002.

(2) Represents amounts due in connection with original employment agreement for reimbursed interest expense.

(3) Includes $369,774, $146,158 and $68,762 of commission income in 2003, 2002 and 2001, respectively.

(4) On December 31, 2003, Mr. Rogers was the only Named Executive Officer who had unvested restricted common stock. The value of the 93,750 shares as of December 31, 2003 was $700,625. The value is based on the fair market value of our common stock on December 31, 2003 of $7.54 per share less the purchase price paid. Mr. Rogers will be entitled to receive any dividends we pay on our common stock.

Stock Option Grants

The Option Grant Table below sets forth information about option grants to the Named Executive Officers during the year ended December 31, 2003, including hypothetical gains or "option spreads" for the options at the end of their respective ten−year terms, as calculated in accordance with the rules of the SEC. Each gain is based on an arbitrarily assumed annualized rate of compound appreciation of the market price at the date of grant of 5% and 10% from the date the option was granted to the end of the option term. Actual gains, if any, on option exercises are dependent on the future performance of our common stock, overall market conditions and continued employment.

Option Grants in Last Fiscal Year

Name	No. of Securities Underlying Options Granted(1)	Percent of Total Options Granted to Employees in Fiscal Year(2)	Exercise Price Per Share(3)	Expiration Date	Potential Realizable Value At Assumed Annual Rates of Stock Price Appreciation For Option Term(4)	
					5%	10%
Hassan M. Ahmed	2,000,000	9.96%	$ 4.47	6/16/2013	$ 5,620,000	$ 14,240,000
Rubin Gruber	430,000	2.14	4.47	6/16/2013	1,208,300	3,061,600
Paul R. Jones	530,000	2.64	4.47	6/16/2013	1,489,300	3,773,600
John M. O'Hara	100,000	0.50	4.47	6/16/2013	281,000	712,000
Gary A. Rogers	430,000	2.14	4.47	6/16/2013	1,208,300	3,061,600

(1) Options vest 25% one year from the date of grant and thereafter an additional 2.0833% for each month of employment.

(2) Based on options to purchase an aggregate of 20,087,276 shares of common stock granted by us to employees, including those granted to the Named Executive Officers, during the fiscal year ended December 31, 2003.

(3) Options were granted with an exercise price equal to the fair market value of our common stock on the date of grant.

(4) The potential realizable value is calculated based on (a) the ten−year term of the option at its time of grant; (b) the assumption that the closing price for the common stock on the date of grant appreciates at the indicated annual rate compounded annually for the entire term of the option; and (c) the assumption that the option is exercised and sold on the last day of its term for the appreciated stock price.

Option Exercises and Holdings

The following table sets forth information concerning the exercise of stock options by each of the Named Executive Officers and the value of unexercised stock options held by them as of December 31, 2003.

Aggregated Option Exercises in Last Fiscal Year And Fiscal Year−end Option Values

Name	Shares Acquired on Exercise	Value Realized(1)	Number of Securities Underlying Unexercised Options at Fiscal Year End		Value of Unexercised In−The−Money Options at Fiscal Year End(2)	
			Exercisable	Unexercisable	Exercisable	Unexercisable
Hassan M. Ahmed	0	$ —	1,179,481	2,273,519	$ 3,166,860	$ 6,393,180
Rubin Gruber	0	—	1,041,147	596,853	3,482,370	1,573,280
Paul R. Jones	100,000	390,800	350,192	600,208	870,980	1,761,790
John M. O'Hara	68,750	483,860	9,167	242,083	66,830	1,342,790
Gary A. Rogers	0	—	73,855	465,145	114,370	1,369,790

(1) The value realized represents the difference between the aggregate closing price of the shares on the date of exercise less the aggregate exercise price paid.

(2) The value of in−the−money options is based on the closing price of our common stock on December 31, 2003 of $7.54 per share, minus the per share exercise price, multiplied by the number of shares underlying the option. These values have not been, and may never be, realized.

Employment Agreement

Albert A. Notini serves as a member of our board of directors and is employed as President and Chief Operating Officer pursuant to an employment agreement entered into in April 2004. Under this agreement Mr. Notini's base salary is $325,000 annually and he is eligible for an "on target bonus" of 85% of his annual base salary subject to the achievement of specific objectives or the occurrence of certain events. In April 2004, Sonus granted Mr. Notini an option to purchase 2,450,000 shares of our common stock at an exercise price of $3.99 per share, with 25% of the number of options vesting on the first anniversary of his commencement date and the remaining 75% vesting in equal monthly increments through the fourth anniversary of the commencement date. This agreement also includes change in control and termination terms and conditions.

Compensation Committee Interlocks and Insider Participation

No interlocking relationship exists between any member of our board of directors or our compensation committee and any member of the board of directors or compensation committee of any other company, and none of these interlocking relationships have existed in the past.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Beneficial Ownership of Securities

The following table sets forth information regarding beneficial ownership of our common stock as of May 31, 2004 by:

- each person who beneficially owns to the best of our knowledge, more than 5% of the outstanding shares of our common stock;
- each of our Named Executive Officers;
- each of our directors; and
- all of our executive officers and directors as a group.

Beneficial ownership is determined in accordance with the rules of the SEC, and includes voting and investment power with respect to shares. In computing the number of shares beneficially owned by each person named in the following table and the percentage ownership of that person, shares of common stock that are subject to stock options held by those persons that are currently exercisable or exercisable within 60 days of May 31, 2004 are deemed outstanding. These shares are not, however, deemed outstanding for purposes of computing the percentage ownership of any other person.

Unless otherwise indicated below, to our knowledge, all persons named in the table have sole voting and investment power with respect to their shares of common stock, except to the extent authority is shared by spouses under applicable law. The percentage of common stock outstanding as of May 31, 2004 is based on 245,759,931 shares of common stock outstanding on that date. Unless

otherwise indicated, the address of each person listed in the table is care of Sonus Networks, Inc., 250 Apollo Drive, Chelmsford, Massachusetts 01824.

	Number of Shares Beneficially Owned	Percentage Outstanding
Executive Officers and Directors:		
Hassan M. Ahmed(1)	8,845,498	3.6%
Rubin Gruber(2)	4,368,863	1.8
Gary A. Rogers(3)	1,674,761	*
Paul J. Severino(4)	571,823	*
Edward T. Anderson(5)	435,947	*
Paul R. Jones(6)	568,099	*
Paul J. Ferri(7)	165,340	*
John M. O'Hara(8)	68,333	*
H. Brian Thompson	20,000	*
Albert A. Notini(9)	16,667	*
All executive officers and directors as a group (13 persons)(10)	24,857,050	9.9
5% Owners:		
Fidelity Management and Research Company(11)	36,667,700	14.9
Barclay's Plc and affiliated entities(12)	13,588,549	5.5

* Less than 1% of the outstanding shares of common stock.

(1) Includes 1,874,667 shares subject to outstanding options that are exercisable as of July 30, 2004. Includes 1,314,000 shares held by family trusts and by his minor children. Mr. Ahmed disclaims beneficial ownership of the shares held by these trusts and his minor children.

(2) Includes 1,264,458 shares subject to outstanding options that are exercisable as of July 30, 2004.

(3) Includes 212,334 shares subject to outstanding options that are exercisable as of July 30, 2004. Includes 219,883 shares held by a family trust and 12,000 shares held in trust for his minor children. Mr. Rogers disclaims beneficial ownership of the shares held by these trusts.

(4) Includes 16,251 shares subject to outstanding options that are exercisable as of July 30, 2004 and 51,000 shares held for the benefit of Mr. Severino's minor child under the Massachusetts Uniform Transfer to Minors Act.

(5) Includes 16,251 shares subject to outstanding options that are exercisable as of July 30, 2004.

(6) Includes 550,817 shares subject to outstanding options that are exercisable as of July 30, 2004.

(7) Includes 16,251 shares subject to outstanding options that are exercisable as of July 30, 2004.

(8) Includes 68,333 shares subject to outstanding options that are exercisable as of July 30, 2004.

(9) Includes 16,667 shares subject to outstanding options that are exercisable as of July 30, 2004.

(10) Includes 5,889,960 shares subject to outstanding options that are exercisable as of July 30, 2004.

(11) According to a Schedule 13G filed on February 17, 2004, Fidelity Management & Research Company (Fidelity) a wholly owned subsidiary of FMR Corp., was the beneficial owner of 36,667,700 shares of common stock in its capacity as investment advisor to various registered investment companies. The power to vote 32,076,770 of such shares resides solely with the boards of trustee of these Fidelity Funds, while the power to dispose of such shares resides with Edward C. Johnson 3rd and FMR Corp. Edward C. Johnson 3rd and FMR Corp. each has sole dispositive power over 2,769,830 of such shares and sole power to vote such shares. Edward C. Johnson 3rd is chairman of FMR Corp., Abigail P. Johnson is a director of FMR Corp. and members of the Johnson family may be deemed to form a controlling group with respect to FMR Corp. Fidelity International Limited (FIL) is the beneficial owner of 1,821,100 of the shares. FIL operates as an

entity independent of FMR Corp and Fidelity, but a partnership controlled by Edward C. Johnson 3rd and members of his family owns shares of FIL voting stock with the right to cast approximately 39.89% of the total votes of FIL voting stock. FMR Corp. maintains that the beneficial ownership of FIL should not be attributed to FMR Corp., but voluntarily has included all shares beneficially owned by FIL into the beneficial ownership of FMR Corp. for the purpose of the Schedule 13G filing. The address of FMR Corp. is 82 Devonshire Street, Boston, MA 02109.

(12) According to a Schedule 13G filed on February 17, 2004, Barclay's Global Investors, N.A. (BGI), a wholly owned subsidiary of Barclay's PLC (Barclay's), was the beneficial owner of 10,168,438 shares of common stock, and Barclay's Global Fund Advisors (BGF), a wholly owned subsidiary of BGI, was the beneficial owner of 2,204,311, each of whom hold the shares in trust accounts for the beneficiaries of those accounts. BGI and BGF have dispository power and voting power over 12,373,349 of those shares. The address of BGI and BGF is 45 Fremont Street, San Francisco, CA 94105.

Equity Compensation Plan Information

The following table provides information as of December 31, 2003 with respect to the shares of our common stock that may be issued under the our existing equity compensation plans.

Plan Category	(A) Number of Securities to be Issued upon Exercise of Outstanding Options, Warrants and Rights	(B) Weighted Average Exercise Price of Outstanding Options, Warrants and Rights	(C) Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column A)
Equity Compensation Plans Approved by Shareholders(1)	28,136,494(3)	$ 4.60	47,189,470(4)
Equity Compensation Plans Not Approved by Shareholders(2)	0	—	0
Total	28,136,494	$ 4.60	47,189,470

(1) Consists the Plan and the 2000 Employee Stock Purchase Plan (ESPP).

(2) Consists of the TTI 1998 Equity Incentive Plan assumed by us and the 2000 Retention Plan established by us in connection with our acquisition of telecom technologies, inc. (TTI). As of December 31, 2003, no additional options or grant of shares may be granted and no shares of our common stock are issuable upon exercise of options under these plans.

(3) Excludes purchase rights presently accruing under the ESPP. The ESPP consists of four consecutive 6−month purchase periods. Eligible employees may purchase shares of common stock at a price equal to 85% of the lower of the fair market value of the common stock at the beginning of each two−year offering period or the end of each semi−annual purchase period. Participation is limited to 20% of an employee's eligible compensation not to exceed amounts allowed by the Internal Revenue Code.

(4) Consists of shares available for future issuance under the Plan and the ESPP. As of December 31, 2003, an aggregate of 35,051,143 shares of common stock were available for issuance under the Plan and 12,138,327 shares of common stock were available for issuance under the ESPP. The Plan incorporates an evergreen provision pursuant to which, on January 1 of each year, the aggregate number of shares reserved for issuance under the Plan automatically increases by a number equal to the lesser of (i) 5% of the total number of shares of common stock outstanding on December 31 of the preceding year, or (ii) such number as our Board of Directors may determine.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information required by this Item 13 is included, as applicable, above under Item 11 captioned "Executive Compensation" and incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Fees For Independent Auditors During Fiscal Years Ended December 31, 2003 and 2002

The following is a summary of the fees billed to Sonus by Ernst & Young LLP for the fiscal years ended December 31, 2003 and 2002 for audit services and in the fiscal years ended December 31, 2003 and 2002 for other professional services.

Fee Category	Fiscal 2003 Fees (2)	Fiscal 2002 Fees (1)
Audit Fees	$ 4,722,285	$ 77,512
Audit−Related Fees	43,000	21,250
Tax Fees	52,000	73,756
All Other Fees	2,500	0
Total Fees	$ 4,819,785	$ 172,518

(1) Includes fees billed by Ernst & Young LLP (E&Y) following their appointment in June 2002 to replace Arthur Andersen LLP as Sonus' independent auditors. Excludes fees billed by Arthur Andersen LLP in the amount of $20,000 for the review of financial statements included in Sonus' first quarter filing on Form 10−Q and in the amount of $15,050 for tax planning and compliance services rendered during fiscal 2002.

(2) Includes fees billed and estimated to be billed by E&Y in 2003 and 2004 for the fiscal 2003 audit and the 2002 and 2001 re−audit work performed in 2004.

Audit Fees

Audit fees consist of professional services rendered for the audit of Sonus' consolidated financial statements, review of the interim consolidated financial statements included in our quarterly reports on Form 10−Q and statutory audits of foreign entities.

Audit−Related Fees

Audit−related fees consist of professional services that are reasonably related to the performance of the audit or review of Sonus' consolidated financial statements, but are not reported under "Audit Fees." These services include employee benefit plan audits, review of internal controls and consultations concerning financial accounting and reporting standards.

Tax Fees

Tax fees consist of professional services for tax compliance, tax reporting, tax advice and tax planning. These services include assistance regarding federal, state and international tax compliance and reporting, sales and use tax advice and international tax planning.

All Other Fees

All other fees consist of products and professional services other than the services reported above. In fiscal 2003, all other fees included a fee for the use of Ernst & Young LLP's on−line research tool.

Policy on Audit Committee Pre−approval of Audit and Non−audit Services

The audit committee has adopted a policy to pre−approve audit and permissible non−audit services provided by the independent auditors. These services many include audit services, audit−related services, tax services and other services. Prior to engagement of the independent auditor for the next year's audit, the independent auditor and Sonus management submit an aggregate of services expected to be rendered during that year for each of the four categories of services to the audit committee for approval. Pre−approval is generally provided for up to one year and any pre−approval is detailed as to the particular service or category of services. The independent auditor and Sonus management periodically report to the audit committee regarding the extent of services provided by the independent auditors in accordance with this pre−approval process. The audit committee may also pre−approve particular services on a case−by−case basis. The audit committee may ratify, without prior approval, certain *de minimis* non−audit services if the aggregate amount of all such non−audit services provided to Sonus constitutes not more than $5,000 during the fiscal year in which the services are delivered, provided such services were not recognized by Sonus at the time as non−audit services and are promptly brought to the attention of the audit committee and approved prior to the completion of the audit. During the fiscal year ended December 31, 2003, there were no de minimis non−audit services provided that the audit committee subsequently ratified as the audit committee pre−approved all of the services performed by Ernst & Young LLP.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES, AND REPORTS ON FORM 8−K

(a) Documents filed as part of Amendment No. 1 to Annual Report on Form 10−K/A:

1) Financial Statements.

The following consolidated financial statements and notes thereto are included in Part II, Item 8 filed as part of this report:

- Report of Independent Registered Public Accounting Firm
- Consolidated Balance Sheets
- Consolidated Statements of Operations
- Consolidated Statements of Stockholders' Equity
- Consolidated Statements of Cash Flows
- Notes to Consolidated Financial Statements

2) Financial Statement Schedules.

None. All schedules are omitted because they are inapplicable, not required under the instructions or because the information is reflected in the consolidated financial statements or notes thereto.

3) List of Exhibits.

The Exhibits filed as part of this Amendment No. 1 to Annual Report on Form 10−K/A are listed in the Exhibit Index immediately preceding such Exhibits, which Exhibit Index is incorporated herein by reference.

(b) Reports on Form 8−K filed during the fourth quarter of fiscal 2003.

Sonus furnished a Current Report on Form 8−K dated October 8, 2003 reporting under Item 12 (Results of Operations and Financial Condition) its actual financial results for the quarter ended September 30, 2003.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, in the Town of Chelmsford, Commonwealth of Massachusetts, on this 28 th day of July, 2004.

SONUS NETWORKS, INC.

By: /s/ HASSAN M. AHMED

Hassan M. Ahmed
Chairman of the Board of Directors and
Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated:

Signature	Title	Date
/s/ HASSAN M. AHMED Hassan M. Ahmed	Chairman of the Board of Directors and Chief Executive Officer (Principal Executive Officer)	July 28, 2004
/s/ ALBERT A. NOTINI Albert A. Notini	President, Chief Operating Officer, and Director (Co−Principal Financial Officer)	July 28, 2004
/s/ BRADLEY T. MILLER Bradley T. Miller	Vice President of Finance, Corporate Controller and Chief Accounting Officer (Principal Accounting Officer and Co−Principal Financial Officer)	July 28, 2004
/s/ EDWARD T. ANDERSON Edward T. Anderson	Director	July 28, 2004
/s/ PAUL J. FERRI Paul J. Ferri	Director	July 28, 2004
/s/ RUBIN GRUBER Rubin Gruber	Director	July 28, 2004
/s/ PAUL S. SEVERINO Paul J. Severino	Director	July 28, 2004
/s/ H. BRIAN THOMPSON H. Brian Thompson	Director	July 28, 2004

SONUS NETWORKS, INC.
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of
Sonus Networks, Inc.:

We have audited the accompanying consolidated balance sheets of Sonus Networks, Inc. as of December 31, 2003 and 2002 and the related consolidated statements of operations, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2003. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Sonus Networks, Inc. as of December 31, 2003 and 2002, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2003, in conformity with U.S. generally accepted accounting principles.

As discussed in Note 2 to the accompanying financial statements, the Company has restated its financial statements for the years ended December 31, 2002 and 2001.

/s/ Ernst & Young LLP

Boston, Massachusetts

July 28, 2004

SONUS NETWORKS, INC.
Consolidated Balance Sheets
(In thousands, except share data)

	December 31, 2003	December 31, 2002 As Restated
Assets		
Current assets:		
Cash and cash equivalents	$ 133,715	$ 57,278
Marketable securities	171,677	60,860
Accounts receivable, net	23,754	4,622
Inventory, net	13,739	10,449
Other current assets	6,935	3,516
Total current assets	349,820	136,725
Property and equipment, net	5,009	11,546
Purchased intangible assets, net	2,402	4,810
Other assets	1,193	436
	$ 358,424	$ 153,517
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 3,248	$ 3,625
Accrued expenses	22,165	16,489
Accrued restructuring expenses	565	2,331
Current portion of deferred revenue	62,698	51,728
Current portion of long−term liabilities	182	1,606
Total current liabilities	88,858	75,779
Long−term deferred revenue, less current portion	24,302	8,024
Long−term liabilities, less current portion	829	3,293&bsp;
Convertible subordinated note	10,000	10,000
Commitments and contingencies (Note 13)		
Stockholders' equity:		
Preferred stock, $0.01 par value; 5,000,000 shares authorized, none issued and outstanding	—	—
Common stock, $0.001 par value; 600,000,000 shares authorized, 247,146,477 and 206,866,358 shares issued and 244,849,567 and 204,599,548 shares outstanding at December 31, 2003 and 2002	247	207
Capital in excess of par value	1,043,581	853,560
Accumulated deficit	(808,562)	(793,426)
Deferred compensation	(564)	(3,659)
Treasury stock, at cost; 2,296,910 and 2,266,810 common shares at December 31, 2003 and 2002	(267)	(261)
Total stockholders' equity	234,435	56,421
	$ 358,424	$ 153,517

The accompanying notes are an integral part of these consolidated financial statements.

SONUS NETWORKS, INC.
Consolidated Statements of Operations
(In thousands, except per share data)

	Year ended December 31,		
	2003	2002	2001
		As Restated	As Restated
Revenues:			
Product	$ 60,851	$ 68,572	$ 104,646
Service	32,359	25,345	24,154
Total revenues	93,210	93,917	128,800
Cost of revenues (1):			
Write−off of inventory and purchase commitments	—	6,130	—
Product	23,575	33,573	43,717
Service	14,334	11,873	19,061
Total cost of revenues	37,909	51,576	62,778
Gross profit	55,301&bsp;	42,341	66,022
Operating expenses:			
Research and development (1)	32,190	44,591	63,896
Sales and marketing (1)	23,169	27,786	40,876
General and administrative (1)	10,475	5,248	12,827
Stock−based compensation	3,418	16,871	74,132
Amortization of goodwill and purchased intangible assets	2,408	4,229	70,551
Write−off of goodwill and purchased intangible assets	—	10,950	392,387
Restructuring charges	—	7,739	7,321
In−process research and development	—	—	44,600
Total operating expenses	71,660	117,414	706,590
Loss from operations	(16,359)	(75,073)	(640,568)
Interest expense	(610)	(676)	(625)
Interest income	2,135	1,994	5,574
Loss before income taxes	(14,834)	(73,755)	(635,619)
Provision for income taxes	302	86	—
Net loss	$ (15,136)	$ (73,841)	$ (635,619)
Basic and diluted net loss per share	$ (0.07)	$ (0.39)	$ (3.68)
Shares used in computing net loss per share (Note 1 (q)):	220,696	191,008	172,905

(1) Excludes non−cash, stock−based compensation expense as follows:			
Cost of revenues	$ 45	$ 235	$ 1,304
Research and development	1,180	8,930	42,764
Sales and marketing	1,542	4,941	17,968
General and administrative	651	2,765	12,096
	$ 3,418	$ 16,871	$ 74,132

The accompanying notes are an integral part of these consolidated financial statements.

SONUS NETWORKS, INC.
Consolidated Statements of Stockholders' Equity

	Common Stock						Treasury Stock		
	Shares	Par Value	Capital in Excess of Par Value	Accumulated Deficit	Stock Subscriptions Receivable	Deferred Compensation	Shares	Cost	Total Stockholders' Equity
Balance, December 31, 2000	184,244,474	$ 184	$ 266,488	$ (83,966)	$ (238)	$ (31,697)	772,500	$ (65)	$ 150,706
Issuance of common stock in connection with employee stock purchase plan	1,021,333	1	7,865	—	—	—	—	—	7,866
Issuance of common stock in connection with acquisition of telecom technologies, inc. (TTI) (Note 5)	15,000,000	15	504,386	—	—	—	—	—	504,401
Issuance of common stock in connection with acquisition of certain assets of Linguateq, Inc. (Note 6)	221,753	—	4,843	—	—	—	—	—	4,843
Issuance of restricted stock awards in connection with acquisition of TTI (Note 5)	3,000,000	3	55,435	—	—	(55,438)	—	—	—
Deferred compensation related to unvested stock options assumed in connection with acquisition of TTI (Note 5)	—	—	22,600	—	—	(22,600)	—	—	—
Deferred compensation related to stock option grants	—	—	1,215	—	—	(1,215)	—	—	—
Compensation expense related to modifications of stock awards	—	—	438	—	—	—	—	—	438
Exercise of stock options	1,703,650	2	4,016	—	—	—	—	—	4,018
Amortization of deferred compensation	—	—	—	—	—	76,873	—	—	76,873
Deferred compensation for terminated employees	—	—	(8,181)	—	—	5,002	—	—	(3,179)
Payment on subscriptions receivable	—	—	—	—	238	—	—	—	238
Repurchase of common stock	—	—	—	—	—	—	241,250	(19)	(19)
Net loss	—	—	—	(635,619)	—	—	—	—	(635,619)
Balance, December 31, 2001 (As Restated)	205,191,210	205	859,105	(719,585)	—	(29,075)	1,013,750	(84)	110,566
Issuance of common stock in connection with employee stock purchase plan	1,199,247	2	2,841	—	—	—	—	—	2,843
Exercise of stock options	475,901	—	159	—	—	—	—	—	159
Amortization of deferred compensation	—	—	—	—	—	21,607	—	—	21,607
Compensation expense related to modifications of stock awards	—	—	190	—	—	—	—	—	190
Deferred compensation for terminated employees	—	—	(8,735)	—	—	3,809	—	—	(4,926)
Repurchase of common stock	—	—	—	—	—	—	1,253,060	(177)	(177)
Net loss	—	—	—	(73,841)	—	—	—	—	(73,841)
Balance, December 31, 2002 (As Restated)	206,866,358	207	853,560	(793,426)	—	(3,659)	2,266,810	(261)	56,421
Sale of common stock, net of issuance costs of $9,932	37,000,000	37	182,781	—	—	—	—		182,818
Issuance of common stock in connection with employee stock purchase plan	1,085,750	1	965	—	—	—	—	—	966
Exercise of stock options	2,194,369	2	5,952	—	—	—	—	—	5,954
Amortization of deferred compensation	—	—	—	&bsp; —	—	3,039	—	—	3,039
Deferred compensation for terminated employees	—	—	(285)	—	—	56	—	—	(229)
Compensation expense related to issuance of common stock options to non−employees and modifications of stock awards	—	—	608	—	—	—	—	—	608
Repurchase of common stock	—	—	—	—	—	—	30,100	(6)	(6)
Net loss	—	—	—	(15,136)	—	—	—	—	(15,136)
Balance, December 31, 2003	247,146,477	$ 247	$ 1,043,581	$ (808,562)	$ —	$ (564)	2,296,910	$ (267)	$ 234,435

The accompanying notes are an integral part of these consolidated financial statements.

SONUS NETWORKS, INC.
Consolidated Statements of Cash Flows
(In thousands)

	Year ended December 31, 2003	2002 As Restated	2001 As Restated
Cash flows from operating activities:			
Net loss	$ (15,136)	$ (73,841)	$ (635,619)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:			
Depreciation	9,724	15,415	15,840
Write−off of inventory	—	6,130	—
Stock−based compensation	3,418	16,871	74,132
Amortization of goodwill and purchased intangible assets	2,408	4,229	70,551
Write−off of goodwill and purchased intangible assets	—	10,950	392,387
In−process research and development	—	—	44,600
Non−cash restructuring benefit	—	—	(16,557)
Changes in current assets and liabilities:			
Accounts receivable	(19,132)	6,059	51,013
Inventory	(3,290)	19,853	(8,571)
Other current assets	(3,419)	2,792	(233)
Accounts payable	(377)	(8,646)	(1,841)
Accrued expenses	3,381	(7,657)	18,356
Deferred revenue	27,248	(649)	(4,801)
Net cash provided by (used in) operating activities	4,825	(8,494)	(743)
Cash flows from investing activities:			
Net purchases of property and equipment	(3,187)	(3,418)	(23,190)
Maturities of marketable securities	19,538	58,524	75,984
Purchases of marketable securities	(130,355)	(43,440)	(96,971)
Other assets	(757)	(66)	(637)
Acquisitions, net of cash acquired	—	—	(6,058)
Net cash (used in) provided by investing activities	(114,761)	11,600	(50,872)
Cash flows from financing activities:			
Net proceeds from sale of common stock to public	182,818	—	—
Sale of common stock in connection with employee stock purchase plan	966	2,843	7,866
Proceeds from exercise of stock options	5,954	159	4,018
Payment of stock subscriptions receivable	—	—	238
Additions to long−term liabilities	—	3,300	—
Payments of long−term liabilities	(3,359)	(1,022)	(527)
Payment of note payable to bank	—	—	(8,000)
Proceeds from issuance of convertible subordinated note	—	—	10,000
Repurchase of common stock	(6)	(177)	(19)
Net cash provided by financing activities	186,373	5,103	13,576
Net increase (decrease) in cash and cash equivalents	76,437	8,209	(38,039)
Cash and cash equivalents, beginning of year	57,278	49,069	87,108
Cash and cash equivalents, end of year	$ 133,715	$ 57,278	$ 49,069

The accompanying notes are an integral part of these consolidated financial statements.

SONUS NETWORKS, INC.

Notes to Consolidated Financial Statements

(1) Operations and Significant Accounting Policies

Sonus Networks, Inc. (Sonus) was incorporated on August 7, 1997 and is a leading provider of voice infrastructure solutions for wireline and wireless service providers. Sonus offers a new generation of carrier−class switching equipment and software that enable voice services to be delivered over packet−based networks.

The accompanying consolidated financial statements reflect the application of certain significant accounting policies as described in this note and elsewhere in the accompanying consolidated financial statements and notes.

(a) Principles of Consolidation

The accompanying consolidated financial statements include the accounts of Sonus and its wholly owned subsidiaries. All material intercompany transactions and balances have been eliminated.

(b) Use of Estimates and Judgments

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods. Significant estimates relied upon in preparing these financial statements include revenue recognition for multiple element arrangements, allowances for doubtful accounts, estimated fair value of investments, including whether any decline in such fair value is other−than−temporary, expected future cash flows used to evaluate the recoverability of long−lived assets, estimated fair values of long−lived assets used to record impairment charges related to intangible assets and goodwill, restructuring and other related charges, contingencies associated with revenue contracts, any contingent liabilities, and recoverability of Sonus' net deferred tax assets and related valuation allowance. Although Sonus regularly assesses these estimates, actual results could differ materially from these estimates. Changes in estimates are recorded in the period in which they become known. Sonus bases its estimates on historical experience and various other assumptions that it believes to be reasonable under the circumstances. Actual results may differ from Sonus' estimates if past experience or other assumptions do not turn out to be substantially accurate.

(c) Cash Equivalents and Marketable Securities

Cash equivalents are stated at cost plus accrued interest, which approximates market value, and have maturities of three months or less at the date of purchase.

Marketable securities are classified as held−to−maturity, as Sonus has the intent and ability to hold to maturity. Marketable securities are reported at amortized cost. Cash equivalents and marketable securities are invested in high quality credit instruments, primarily U.S. Government obligations and corporate obligations with contractual maturities of less than one year. There have been no material gains or losses to date.

(d) Concentrations of Credit and Off−Balance Sheet Risk, Significant Customers and Limited Suppliers

The financial instruments that potentially subject Sonus to concentrations of credit risk are cash, cash equivalents, marketable securities and accounts receivable. Sonus has no off−balance sheet

contracts such as foreign exchange contracts, options contracts or other foreign hedging arrangements. Sonus' cash and cash equivalent holdings are diversified among four financial institutions.

For the years ended December 31, 2003, 2002 and 2001, four, one and three customers, each of whom contributed more than 10% of revenues, accounted for an aggregate of 57%, 42% and 60% of revenues.

As of December 31, 2003 and 2002, four and three customers each accounted for an aggregate of 68% and 78% of Sonus' accounts receivable balance. Sonus performs ongoing credit evaluations of our customers and generally do not require collateral on accounts receivable. Sonus maintains an allowance for potential credit losses and such losses have been within management's expectations.

International revenues, primarily from Asia and Europe, were 21%, 18% and 23% of revenues for the years ended December 31, 2003, 2002 and 2001.

Certain components and software licenses from third parties used in Sonus' products are procured from a single source. The failure of a supplier, including a subcontractor, to deliver on schedule could delay or interrupt Sonus' delivery of products and thereby materially adversely affect Sonus' revenues and operating results.

(e) Foreign Currency Translation

Sonus' customer contracts are primarily denominated in U.S. dollars, and expenses denominated in foreign currencies are translated at average exchange rates for the period. For non−U.S. subsidiaries, which operate in a local currency environment, assets and liabilities are translated at period−end exchange rates. Translation adjustments were not material for any period presented.

(f) Unearned Accounts Receivable

Unearned accounts receivable represents products shipped to customers where Sonus has a contractual right to bill the customer and collectibility is probable prior to satisfying Sonus' revenue recognition criteria.

(g) Inventory

Inventory is stated at the lower of cost (first−in, first−out basis) or net realizable value and consists of final assembly materials and finished goods.

Unearned inventory represents deferred cost of revenues prior to satisfaction of Sonus' revenue recognition criteria.

(h) Property and Equipment

Property and equipment are stated at cost, net of accumulated depreciation. Expenditures for maintenance and repairs are charged to expense as incurred. Depreciation is computed using the straight−line method over the estimated useful life of the related assets, which range from three to five years. Leasehold improvements are amortized over the lesser of the life of the lease or five years. When an item is sold or retired, the cost and related accumulated depreciation is relieved, and the resulting gain or loss, if any, is recognized in the statement of operations.

(i) Goodwill and Purchased Intangible Assets

In June 2001, the FASB issued SFAS No. 142, *Goodwill and Other Intangible Assets*. SFAS No. 142 eliminated the amortization of goodwill and certain other intangibles with indefinite lives and instead subjects these assets to periodic impairment assessments. SFAS No. 142 was effective for all goodwill and certain other intangibles acquired after June 30, 2001 and commenced on January 1, 2002 for all goodwill and certain other intangibles existing on June 30, 2001.

In accordance with SFAS No. 144, the carrying value of intangible assets and other long−lived assets is reviewed on a regular basis for the existence of facts or circumstances, both internally and externally, that may suggest impairment. Factors Sonus considers important which could trigger an impairment review include:

- Significant underperformance relative to historical or projected future operating results;
- Significant negative industry or economic trends;
- Significant change in circumstances relative to a large customer;
- Significant decline in Sonus' stock price for a sustained period; and
- Sonus' market capitalization relative to Sonus' net book value.

If such circumstances exist, Sonus evaluates the carrying value of long−lived assets, other than goodwill, to determine if impairment exists based upon estimated undiscounted future cash flows over the remaining useful life of the assets and comparing that value to the carrying value of the assets. In determining expected future cash flows, assets are grouped at the lowest level for which cash flows are identifiable and independent of cash flows from other asset groups. If the carrying value of the asset is greater than the estimated future cash flows, the asset is written down to estimated fair value. The estimated future cash flows and valuation of long−lived assets requires significant estimates and assumptions, including revenue and expense growth projections and fair value estimates, such as estimated replacement cost and relief from royalty. The estimates contain management's best estimates, using appropriate and customary assumptions and projections at the time.

Purchased intangible assets of $2,402,000 as of December 31, 2003 are carried at cost less accumulated amortization. Amortization is computed over the estimated useful lives of the respective assets. Sonus expects that the remaining amount of purchased intangible assets will be fully amortized by December 2004.

(j) Other Assets

Other assets are deposits for leased facilities.

(k) Revenue Recognition

Sonus recognizes revenues from product sales when persuasive evidence of an arrangement exists, delivery has occurred, the sales price is fixed or determinable and collectibility of the related receivable is probable, unless Sonus has future obligations, including a requirement to deliver additional elements which are essential to the functionality of the delivered elements or for which vendor specific objective evidence of fair value (VSOE) does not exist or customer acceptance is required, in which case the revenues and related costs are deferred until those obligations are satisfied or contingencies are resolved.

Many of Sonus' sales are generated from complex contractual arrangements, which require significant revenue recognition judgments, particularly in the case of multiple element arrangements. When a sale involves multiple elements, such as products, maintenance or professional services, Sonus allocates the entire sales price to each respective element based on VSOE or using the residual method when VSOE cannot be established for one of the delivered elements in the arrangement. Sonus then recognizes revenues on each element in accordance with its policies for product and service revenue recognition. Sonus determines VSOE based upon the price charged when the same element is sold separately. If Sonus cannot establish VSOE for each undelivered element, it defers the entire contract revenues until the earlier of the establishment of VSOE or delivery of the undelivered element.

In addition, if an arrangement with a customer includes a specified upgrade right for which VSOE cannot be established, Sonus defers all revenue related to the arrangement until the earlier of the delivery of the specified upgrade or the establishment of VSOE for the specified upgrade. In determining whether a specified upgrade right exists, Sonus has concluded that if the specified upgrade is included in the customer contract or otherwise becomes part of the arrangement with the customer, then a specified upgrade right exists. Sonus has concluded that communications with customers in the normal course of business regarding customer feature requests and Sonus' product plans do not create specified upgrade rights.

Maintenance and support services are recognized ratably over the life of the maintenance and support service period, which typically is one year when the services are sold separately and up to five years when bundled with the product fees. Maintenance and support services include telephone support and unspecified rights to product upgrades and enhancements. These services are typically sold for a one−year term and either are sold as part of a multiple element arrangement with products or are sold independently at time of renewal. Maintenance and support VSOE represents a consistent percentage of the sales prices charged to customers. The application of judgment could affect the continued determination of maintenance VSOE and our ability to recognize revenue using the residual method.

Installation service revenues are typically recognized at the time of the related product revenue recognition as installation is typically complete by the time of product revenue recognition. Professional services are recognized as the services are performed.

Sonus sells the majority of its products directly to end−users. For products sold through resellers and distributors Sonus recognizes revenues on a sell−through method utilizing information provided to it from its resellers and distributors.

Product shipped to customers and related services where amounts are (1) billed pursuant to a contractual right and collection is probable, or (2) collected prior to satisfying the revenue recognition criteria are reflected as deferred revenues. Deferred revenues also include customer deposits and amounts associated with maintenance contracts, which are recognized on a straight−line basis over the related service periods, and free or discounted products and services not yet provided to customers. Deferred revenues not expected to be recognized within one year of the balance sheet date are classified as long−term deferred revenues.

Sonus defers any incremental direct costs, such as inventory, royalties, commissions and third−party installation costs, incurred prior to satisfaction of its revenue recognition criteria and records them in proportion to revenue recognized.

(l) Software Development Costs

Sonus accounts for its software development costs in accordance with SFAS No. 86, *Accounting for the Costs of Computer Software to Be Sold, Leased or Otherwise Marketed.* Accordingly, the costs for the development of new software and substantial enhancements to existing software are expensed as incurred until technological feasibility has been established, at which time any additional costs would be capitalized. Sonus has determined that technological feasibility is established at the time a working model of the software is completed. Because Sonus believes its current process for developing software is essentially completed concurrently with the establishment of technological feasibility, no costs have been capitalized to date.

(m) Stock−based Compensation

In October 1995, the FASB issued SFAS No. 123, *Accounting for Stock−Based Compensation.* SFAS No. 123 provides that companies may account for stock−based compensation under either the fair value−based method of accounting under SFAS No. 123 or the intrinsic value−based method provided by APB No. 25, *Accounting for Stock Issued to Employees.* Sonus uses the intrinsic value−based method of APB No. 25 to account for all of its employee stock−based compensation plans and uses the fair value method of SFAS No. 123 to account for all non−employee stock−based compensation. Sonus follows FIN 28, *Accounting for Stock Appreciation Rights and Other Variable Stock Option or Award Plans* and amortizes the intrinsic value for all awards as measured under APB No. 25 on an accelerated basis. SFAS No. 123, as amended by SFAS No. 148, *Accounting for Stock−Based Compensation—Transition and Disclosure—an amendment of FASB Statement No. 123,* requires companies following APB No. 25 to make pro forma disclosure in the notes to the consolidated financial statements using the measurement provisions of SFAS No. 123.

Sonus has computed the pro forma disclosures required under SFAS No. 123 for stock options granted to employees and shares purchased under the 2000 Employee Stock Purchase Plan (ESPP) using the Black Scholes option−pricing model. In valuing the stock options granted, Sonus used an assumed risk−free interest rate of 3% for both 2003 and 2002 and 4.5% for 2001, volatility of 137% for 2003 and 150% for both 2002 and 2001 and an expected life ranging from three to five years, with the assumption that dividends will not be paid. In valuing the ESPP, Sonus used an assumed risk−free interest rate of 1.1%−4.7% for 2003, 1.6%−6.8% for 2002 and 3.4%−6.6% for 2001, volatility of 137%−150% for 2003 and 80%−150% for 2002 and 2001 and an expected life ranging from six months to two years, with the assumption that dividends will not be paid. The pro forma information is as follows:

	Year ended December 31,		
	2003	2002	2001
		As Restated	As Restated
	(in thousands, except per share data)		
Net loss—			
As reported	$ (15,136)	$ (73,841)	$ (635,619)
Plus: Employee stock−based compensation expense included in net loss under intrinsic value method related to options	2,589	6,109	17,730
Less: Employee stock−based compensation under fair value method	(43,404)	(46,116)	(46,014)
Pro forma	$ (55,951)	$ (113,848)	$ (663,903)
Basic and diluted net loss per share—			
As reported	$ (0.07)	$ (0.39)	$ (3.68)
Pro forma	(0.25)	(0.60)	(3.84)

(n) Comprehensive Loss

Sonus applies SFAS No. 130, *Reporting Comprehensive Income*. The comprehensive loss for the years ended December 31, 2003, 2002 and 2001 does not differ from the reported loss.

(o) Fair Value of Financial Instruments

The carrying amounts of Sonus' financial instruments, which include cash equivalents, marketable securities, accounts payable, long−term liabilities and the convertible subordinated note, approximate their fair value.

(p) Disclosures about Segments of an Enterprise

SFAS No. 131, *Disclosures about Segments of an Enterprise and Related Information*, established standards for reporting information regarding operating segments and established standards for related disclosures about products and services and geographic areas. Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision maker in making decisions regarding resource allocation and assessing performance. To date, the chief operating decision maker has made such decisions and assessed performance at the company level.

(q) Net Loss Per Share

Basic loss per share is based on the weighted average number of unrestricted common shares outstanding during the period. Diluted loss per share reflects the per share effect of dilutive common stock equivalents, including common stock issuable upon the exercise of stock options, conversion of convertible subordinated notes and shares of common stock issued in connection with our acquisition of telecom technologies, inc. (TTI), which were subject to the achievement of milestones and employee retention (Notes 5 and 14(f)). Common stock equivalents at December 31, 2003, 2002 and 2001 were not included in the computation of diluted loss per share because Sonus recorded losses for each of the years then ended.

The following table sets forth the computation of shares used in calculating the basic and diluted net loss per share, in thousands:

	Year ended December 31,		
	2003	2002	2001
		As Restated	As Restated
Weighted average common shares outstanding	224,529	203,358	198,581
Less weighted average restricted common shares outstanding	(3,833)	(12,350)	(25,676)
Shares used in computing basic and diluted net loss per share	220,696	191,008	172,905

Excluded from the computation of diluted net loss per share in the above table are options to purchase shares of common stock and shares of common stock issuable upon conversion of convertible subordinated notes representing an aggregate of 28,469,634, 12,746,113 and 20,748,200 as of December 31, 2003, 2002 and 2001, as their effects would have been anti−dilutive.

(r) Loss Contingencies

Loss Contingencies. Sonus is subject to ongoing business risks that affect the estimation process of the carrying value of assets, the recording of liabilities and the possibility of various loss contingencies, arising in the ordinary course of business. Under SFAS No. 5, an estimated loss contingency is accrued when it is probable that a liability has been incurred or an asset has been impaired and the amount of loss can be reasonably estimated. Sonus regularly evaluates current information available to it to determine whether such amounts should be adjusted. Based on Sonus' analysis, it has established the following allowance and reserves:

Allowance for Doubtful Accounts. Sonus establishes billing terms at the time it negotiates purchase agreements with its customers. Sonus continually monitors timely payments and assesses any collection issues. The allowance for doubtful accounts is based on Sonus' detailed assessment of the collectibility of specific customer accounts. While Sonus believes that its allowance for doubtful accounts is adequate and that the judgment applied is appropriate, if there is a deterioration of a customer's creditworthiness or actual defaults are higher than historical experience, the actual results could differ from these estimates. While such credit losses have historically been within Sonus' expectations and the allowances that have been established, Sonus cannot guarantee that it will continue to experience the same credit loss rates that it has in the past. If the financial condition of Sonus' customers were to deteriorate, resulting in an impairment of their ability to make payment, additional allowances may be required. Sonus' failure to accurately estimate the losses for doubtful accounts and ensure that payments are received on a timely basis could have a material adverse effect on its business, financial condition and results of operations.

Inventory Reserves. Inventory purchases and commitments are based upon estimated future demand for Sonus' products. Sonus values inventory at the lower of cost or net realizable value and provides inventory reserves based on excess and obsolete inventory determined primarily by future demand forecasts and records changes to such reserves through adjustments to cost of revenues. Sonus assesses such demand forecasts on at least a quarterly basis. If Sonus records a charge to reduce inventory to its estimated net realizable value, Sonus cannot increase its carrying value due to subsequent changes in demand forecasts. Accordingly, if inventory previously written down to its net realizable value is subsequently sold, Sonus may realize improved gross profit margins on those transactions.

Sonus also records a full inventory reserve for evaluation equipment at the time of shipment to its customers as a charge to sales and marketing expense as Sonus' experience with this type of inventory indicates it is probable that the inventory will not be realizable. If these evaluation shipments should convert to revenue, Sonus records a benefit to sales and marketing expense and records the full cost of revenues in the period of revenue recognition.

Sonus has experienced significant changes in its product demand and, as a result, its required inventory reserves have fluctuated in recent periods. As of December 31, 2003 and 2002, inventory of $13.7 million and $10.4 million, was net of reserves of $13.8 million and $18.3 million. It is possible that significant changes in required inventory reserves may continue to occur in the future if there is a sudden and significant change in the demand for Sonus' products, changes in the amount of customer evaluation inventory or higher risks of inventory obsolescence because of rapidly changing technology.

Warranty Reserve. Sonus' products are covered by a standard warranty of 90 days for software and one year for hardware. In addition, certain customer contracts include warranty−type provisions for epidemic or similar product failures generally for the contractual period or the life of the product in accordance with published telecommunications standards. Sonus accrues for such contingent obligations when the occurrence of such obligation is probable and the amount of such obligation is reasonably estimable. Sonus has not incurred significant costs related to such provisions. Sonus' customers typically purchase maintenance and support contracts, which encompass its warranty obligations. Sonus' warranty reserve reflects estimated material and labor costs for potential or actual product issues in its installed base that are not covered under maintenance contracts but for which Sonus expects to incur an obligation. Sonus' estimates of anticipated rates of warranty claims and costs are primarily based on historical information and future forecasts.

In addition, certain of our customer contracts include provisions under which we may be obligated to pay penalties generally for the contractual period or the life of the product if our products fail or do not perform in accordance with specifications. Sonus accrues for such contingent obligations when the occurrence of such obligation is probable and the amount of such obligation is reasonably estimable. Sonus has not incurred significant costs related to such provisions. Sonus periodically assesses the adequacy of its recorded warranty liabilities and adjusts the amounts as necessary. While Sonus believes its warranty reserve is adequate to address known warranty issues, an increase in product failures rates, material usage or service delivery costs may result in an increase to its warranty reserve and gross profit could be adversely affected.

Royalty Accrual. Sonus accrues for royalties related to technology it licenses from vendors based on established royalty rates and usage. In certain cases, Sonus has been contacted by third parties, who claim that Sonus' products infringe on certain intellectual property of the third party. Sonus evaluates these claims and accrues for royalties when the amounts are probable and reasonably estimable. While Sonus believes that the amounts accrued for estimated royalties are adequate, the amounts required to ultimately settle royalty obligations may be different.

Reserve for Litigation and Legal Fees. Sonus is subject to various legal claims, including securities litigation and intellectual property claims. Sonus reserves for legal contingencies and legal fees when the amounts are probable and reasonably estimable. Sonus' director and officer liability insurance policies provide only limited liability protection relating to the securities class action and derivative lawsuits against Sonous and certain of its officers and directors. Sonus intends to defend these matters vigorously, although the ultimate outcome of these items is uncertain and the potential loss, if any, may be significantly higher or lower than the amounts Sonus has previously accrued.

(s) Recent Accounting Pronouncements

In November 2002, the FASB issued FIN 45, *Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others.* FIN 45 elaborates on the disclosures to be made by a guarantor in its interim and annual financial statements about its obligations under certain guarantees that it has issued. It also clarifies that a guarantor is required to recognize, at the inception of a guarantee, a liability for the fair value of the obligation undertaken in issuing the guarantee. The initial recognition and initial measurement provisions of the interpretation are applicable on a prospective basis to guarantees issued or modified after December 31, 2002 and the disclosure requirements in this interpretation are effective for financial statements of interim or annual

periods ending after December 15, 2002. The FIN 45 disclosure requirements are included in Note 8(c). The adoption of FIN 45 did not have a material impact on Sonus' financial position or results of operations.

In January 2003, the FASB issued FIN 46, *Consolidation of Variable Interest Entities* and, in December 2003, issued a revision to that interpretation (FIN 46R). FIN 46R replaces FIN 46 and addresses consolidation by business enterprises of variable interest entities that possess certain characteristics. A variable interest entity (VIE) is defined as (a) an ownership, contractual or monetary interest in an entity where the ability to influence financial decisions is not proportional to the investment interest, or (b) an entity lacking the invested capital sufficient to fund future activities without the support of a third party. FIN 46R establishes standards for determining under what circumstances VIEs should be consolidated with their primary beneficiary, including those to which the usual condition for consolidation does not apply. Sonus currently does not have any variable interest entities.

In May 2003, the FASB issued SFAS No. 150, *Accounting For Certain Financial Instruments with Characteristics of Both Liabilities and Equity*, which establishes standards for how an issuer of financial instruments classifies and measures certain financial instruments with characteristics of both liabilities and equity. SFAS No. 150 requires that an issuer classify a financial instrument that is within its scope as a liability (or an asset in some circumstances) because that financial instrument embodies an obligation of the issuer. SFAS No. 150 is effective for financial instruments entered into or modified after May 31, 2003, and otherwise is effective at the beginning of the first interim period beginning after June 15, 2003. The adoption of SFAS No. 150 did not have any impact on Sonus' overall financial position or results of operations.

In August 2003, the EITF reached a consensus on Issue No. 03−05, *Applicability of AICPA Statement of Position 97−2 to Non−Software Deliverables in an Arrangement Containing More−Than−Incidental Software*. EITF Issue No. 03−05 addresses the applicability of SOP 97−2 to non−software deliverables in an arrangement containing more−than−incidental software. In an arrangement that includes software that is more−than−incidental to the products or services as a whole, software and software−related elements are included within the scope of SOP 97−2. Software−related elements include software products and services, as well as any non−software deliverables for which a software deliverable is essential to its functionality. The adoption of this statement did not have a material impact on Sonus' consolidated financial statements.

In December 2003, the staff of the Securities and Exchange Commission (SEC) issued Staff Accounting Bulletin (SAB) No. 104 (SAB 104), *Revenue Recognition*, which supersedes SAB No. 101, *Revenue Recognition in Financial Statements*. SAB No. 104's primary purpose is to rescind the accounting guidance contained in SAB No. 101 related to multiple−element revenue arrangements that was superseded as a result of the issuance of EITF Issue No. 00−21, *Accounting for Revenue Arrangements with Multiple Deliverables*. Additionally, SAB No. 104 rescinds the SEC's related *Revenue Recognition in Financial Statements Frequently Asked Questions and Answers* issued with SAB No. 101 that had been codified in SEC Topic 13, *Revenue Recognition*. While the wording of SAB No. 104 has changed to reflect the issuance of EITF Issue No. 00−21, the revenue recognition principles of SAB No. 101 remain largely unchanged by the issuance of SAB No. 104, which was effective upon issuance. Sonus adopted the provisions of SAB No. 104 in the fourth quarter of 2003. Sonus' adoption of SAB No. 104 did not have a material effect on its financial position or results of operations.

(2) Restatement of Consolidated Financial Statements

In connection with certain matters which were identified in January through March 2004, Sonus determined that the accounting with respect to certain prior period transactions required adjustment. As a result, Sonus has restated its consolidated financial statements for the years ended December 31, 2002 and 2001. The restated financial statements include a number of adjustments which primarily relate to revenue, deferred revenue, inventory reserves, purchase accounting, impairments, accrued expenses and stock−based compensation. Adjustments to revenue result in revenue being deferred and recognized in subsequent periods. Adjustments to inventory and accrued expenses are primarily to increase or decrease reserve levels previously reported. Adjustments to purchase accounting, impairment, and stock−based compensation relate primarily to the timing of expense recognition.

The net effects of all of the restatement adjustments on the statements of operations, and on all the balance sheet accounts, as of the dates and for the periods indicated are as follows, in thousands, except per share data:

	As of or for the year ended Dec. 31, 2002	As of or for the year ended Dec. 31, 2001
Consolidated Statement of Operations Data:		
Increase (decrease) in revenue	$ 31,359	$ (44,399)
(Increase) decrease in loss before income taxes	(5,285)	9,813
(Increase) decrease in net loss	(5,371)	9,813
(Increase) decrease in net loss per share	$ (0.03)	$ 0.06
Consolidated Balance Sheet Data:		
Increase (decrease) in cash and cash equivalents	$ 6,971	$ (54)
Increase (decrease) in accounts receivable	1,666	1,241
Increase (decrease) in inventory	(327)	11,437
Increase (decrease) in other current assets	(290)	3,356
Increase (decrease) in goodwill and purchased intangible assets, net	3,636	15,453
Increase (decrease) in all other assets	328	(111)
Increase (decrease) in accounts payable	(517)	3,641
Increase (decrease) in accrued expenses	(16,890)	(9,225)
Increase (decrease) in accrued restructuring expenses	(812)	(17,344)
Deferred Revenue:		
Increase (decrease) in current portion of deferred revenue	22,493	43,110
Increase (decrease) in long−term deferred revenue	8,024	3,942
Total increase (decrease) in deferred revenue	$ 30,517	$ 47,052
Increase (decrease) in current portion of long−term liabilities	$ —	$ (483)
Increase (decrease) in stockholders' equity	(314)	7,681

The following discussion provides additional information regarding these adjustments.

Revenue Adjustments

Deferral of product revenue

Sonus has deferred revenues of $36.7 million previously reported in 2001 from a particular customer transaction. The amount of $27.5 million was subsequently recognized in the second quarter of 2002, while the remainder was allocated to maintenance revenues and recognized over the period the services are provided. This transaction involved a multiple element arrangement. Sonus previously recognized revenue in 2001 under this contractual arrangement upon delivery and acceptance of certain product and software releases. Sonus has now determined that there was insufficient support to establish vendor specific objective evidence of fair value (VSOE) with respect to certain undelivered software releases and determined the existence of certain previously unidentified specified software releases. As a result, Sonus has deferred product revenues associated with the products and software releases shipped to this customer in 2001 until the second quarter of 2002, when all software releases under the arrangement were delivered.

In the fourth quarter of 2002, Sonus amended its arrangement with this customer to include, among other items, certain additional future software releases. Sonus has determined that VSOE of fair value did not exist for certain undelivered software releases. As a result, Sonus has deferred revenue of $16.2 million associated with products and software releases shipped to this customer during the fourth quarter of 2002 and the first three quarters of 2003. Sonus recognized $10.9 million of those revenues in the fourth quarter of 2003 when the final software release specified in the amendment was delivered to the customer, and the remaining amount was deferred and allocated to maintenance services and estimated discounts on future purchases.

Maintenance revenue

A number of our customer transactions involve multiple elements, including the delivery of product and maintenance services as part of a bundled offering. Statement of Position (SOP) 97−2, *Software Revenue Recognition*, requires maintenance revenue to be recognized over the period services are provided. Sonus identified certain circumstances in which it offered maintenance services at no additional charge or at discounted rates to certain customers but did not separate the fair value for the maintenance from product revenue. This resulted in revenue associated with the value of the undelivered maintenance services not being recognized over the service period. In the restated financial statements, Sonus has recognized maintenance revenues ratably over the period in which the maintenance services were provided based on the deferral of the applicable VSOE of maintenance services. In such cases, Sonus has reclassified maintenance services from product revenue to service revenue for the applicable periods presented. Sonus also identified certain circumstances in which insufficient value was allocated to maintenance. In such cases, Sonus has reclassified additional amounts from product revenue to service revenue for the applicable periods presented. In connection with the recognition of the deferred product revenue described above in 2002 and 2003, a significant portion of the product revenue was allocated to the value of undelivered maintenance services and deferred over the five−year period in which the services are being provided.

Delivery

Sonus identified transactions where it delivered some, but not all, of the product required under an arrangement. Previously, Sonus deferred a portion of the revenue for these undelivered products

based on the pricing in the arrangement, and recognized the remaining revenue on the delivered products. On a restated basis, Sonus has deferred all revenue until all elements of the transaction were delivered because it was not able to establish VSOE for the undelivered product or, in some instances, because such undelivered product was essential to the functionality of the delivered product.

Customer acceptance

Sonus identified certain circumstances where revenue was recognized in a period other than one in which acceptance was achieved or other contingencies were resolved. As restated, revenue from such arrangements is recorded in the period in which customer acceptance occurred or other contingencies were resolved.

Other

In addition to the above, Sonus identified several errors affecting revenue. Sonus identified one instance in which it provided equipment to satisfy a contractual requirement, for which Sonus has reclassified $274,000 from cost of revenues to reduction of revenue in 2001. Sonus identified another transaction in which a customer provided it with equipment valued at $511,000 as part of a contractual renegotiation. Sonus previously did not record this component of the transaction and, on a restated basis, has increased its fixed assets and revenue by $386,000 in 2002 and by $125,000 in 2003.

Summary

The following table is a reconciliation of revenue as previously reported to amounts as restated for the periods indicated, in thousands:

	Year ended Dec. 31, 2002	Year ended Dec. 31, 2001
Revenues, as previously reported	$ 62,558	$ 173,199
Revenue Restatement Adjustments:		
Deferral of product revenue	34,644	(35,389)
Maintenance revenue	(10,910)	(3,656)
Delivery	3,898	(3,920)
Customer acceptance	2,285	(2,275)
Other	1,442	841
Total Revenue Restatement Adjustments	31,359	(44,399)
Revenues, as restated	$ 93,917	$ 128,800

Expense Adjustments

Accrued expenses

Sonus identified several accrued expense accounts that required adjustment to be in accordance with SFAS No. 5, *Accounting for Contingencies.* In most instances, Sonus lacked adequate support to assess either the probability or estimability for those contingencies for which Sonus has adjusted.

The following table is a reconciliation of accrued expense adjustments by category as of the dates indicated, in thousands:

	Dec. 31, 2002	Dec. 31, 2001
Accrued expense adjustments—increase/(decrease) for:		
Employee compensation and related costs	$ 208	$ 1,217
Professional fees	(1,239)	(1,544)
Royalties	1,492	(1,360)
Warranty reserve	(3,385)	(2,378)
Post−shipment obligations to customers	(2,527)	(2,800)
Customer deposits	(7,240)	—
Other	(4,199)	(2,360)
Total accrued expense adjustments	$ (16,890)	$ (9,225)

Restructuring expense and benefits

In connection with our review and analysis, Sonus determined that a restructuring benefit of $16,557,000 for a lease renegotiation originally recorded in 2002 should have been recorded in 2001. In addition, Sonus reduced 2001 restructuring expense and related accruals by $1,929,000 related to balances that lacked support and increased 2002 expenses by $1,306,000. The effect of these adjustments was to reduce restructuring expense from $25,807,000 to $7,321,000 in 2001, and to adjusted the restructuring item from a benefit of $10,125,000 to an expense of $7,739,000 in 2002.

Valuation of Intangibles

During 2001, Sonus acquired two companies, telecom technologies, inc. (TTI) and Linguateq, Inc. (Linguateq). Sonus accounted for the TTI acquisition as a purchase in accordance with Accounting Principles Board (APB) No. 16, *Business Combinations,* and for Linguateq as a purchase in accordance with SFAS No. 141, *Business Combinations*. In connection with the TTI acquisition re−appraisal by a third party, Sonus has re−examained the total consideration paid, net liabilities assumed, and certain assumptions and calculations supporting the original appraisal of the identified intangible assets acquired from TTI. These assumptions included the customer turnover rate, the gross and operating margin percentages and inconsistencies in the profit assumptions used to value in−process research and development (IPR&D) compared to other identified intangible assets. The results of these changes to the purchase price and related allocation for the TTI acquisition are as follows:

Purchase Price of TTI	As Reported	Adjustments	As Restated
		(in thousands)	
Fair market value of shares issued	$ 527,613	$ (612)	$ 527,001
Liabilities assumed	21,184	(1,375)	19,809
Acquisition expenses	5,833	(67)	5,766
Total	$ 554,630	$ (2,054)	$ 552,576

As a result of re−appraisal of assets acquired, the final purchase price has been allocated to the tangible and intangible assets acquired based upon their fair values as follows:

Purchase Price Allocation of TTI	As Reported	Adjustments	As Restated
		(in thousands)	
Tangible assets	$ 8,296	$ 1,096	$ 9,392
Intangible assets:			
Workforce	3,000	3,900	6,900
Developed technology	11,900	2,100	14,000
Customer relationships	17,400	6,800	24,200
In−process research and development	40,000	800	40,800
Deferred compensation related to unvested stock options	22,600	—	22,600
Goodwill	451,434	(16,750)	434,684
Total	$ 554,630	$ (2,054)	$ 552,576

In connection with the revised appraisals, Sonus has determined that the useful life of the TTI customer relationships and goodwill should be five years, compared to three years as previously reported. The impact to amortization expense as a result of the change in estimated useful lives and valuation of intangibles was an increase of $2,715,000 for the year ended December 31, 2002 and a decrease of $37,208,000 for the year ended December 31, 2001.

Impairment

In 2001, in light of negative industry and economic conditions, a general decline in technology valuations, and its decision to discontinue the development and use of certain acquired technology, Sonus performed an assessment of the carrying value of goodwill and purchased intangible assets from TTI recorded in connection with SFAS No. 121, *Accounting for the Impairment of Long−lived Assets and Assets to be Disposed of*, and originally recorded an impairment charge of $374,735,000. Due to the changes in the valuation of intangible assets and their useful lives described above and the use of more appropriate revenue projections supporting the impairment calculation performed under SFAS No. 121 in 2001, Sonus performed a new impairment assessment with the assistance of a new third−party

appraiser, which resulted in the following impairment charge (after the reallocation of goodwill to the purchased intangibles):

SFAS No. 121 Impairment of Assets Acquired from TTI As Reported	Impairment Charge for the year ended December 31, 2001	Remaining Value as of December 31, 2001
	(in thousands)	
Customer relationships	$ 200,217	$ 2,308
Developed technology	138,715	—
Workforce	34,084	797
Fixed assets	1,719	—
Total	$ 374,735	$ 3,105

SFAS No. 121 Impairment of Assets Acquired from TTI As Restated	Impairment Charge for the year ended December 31, 2001	Remaining Value as of December 31, 2001
	(in thousands)	
Customer relationships	$ 204,016	$ 16,350
Developed technology	126,821	—
Workforce	59,831	2,381
Fixed assets	1,719	—
Total	$ 392,387	$ 18,731

In 2002, Sonus adopted SFAS No. 141, which resulted in a reclassification of all remaining workforce−related intangible assets into goodwill. As a result of the continuing and significant decline in the market for telecommunications equipment and pursuant to SFAS No. 144, *Accounting for the Impairment or Disposal of Long−lived Assets*, Sonus performed an impairment analysis of certain technology acquired from Linguateq. In addition, Sonus performed an impairment analysis on our remaining goodwill for both the TTI and Linguateq acquisitions pursuant to SFAS No. 142, *Goodwill and Other Intangible Assets*. The results of these analyses are summarized in the following table, in thousands:

	Year Ended December 31, 2002		
	Impairment charge, as Reported	Adjustments	Impairment charge, as Restated
TTI customer relationships	$ —	$ 7,669	$ 7,669
TTI goodwill	796	1,585	2,381
Linguateq developed technology and customer relationship	175	—	175
Linguateq goodwill	877	(152)	725
Total	$ 1,848	$ 9,102	$ 10,950

Stock−based Compensation

Sonus identified items in the calculation of stock−based compensation and related items that required adjustments to the stockholders' equity section of Sonus' balance sheet, and its stock−based compensation expense. These items pertain to errors involving the amortization and recapture of deferred compensation, the 2002 exchange of outstanding employee stock options, and intrinsic value charges for restricted stock and stock options grants and modifications.

Sonus previously adopted the accelerated method of amortizing all deferred compensation defined under FIN 28 *Accounting for Stock Appreciation Rights and Other Variable Stock Option or Award Plans*. In the event of forfeiture of a stock−based award, FIN 44, *Accounting for Certain Transactions involving Stock Compensation, an interpretation of APB Opinion No. 25*, requires that compensation expense be adjusted to recapture the compensation expense previously recorded related to unvested stock−based awards, in the period of forfeiture. Sonus previously had not recorded recapture of any such excess compensation expense upon the forfeiture of a stock−based award upon employee termination. As a result, Sonus has decreased stock−based compensation by $4,926,000 in 2002 and $3,179,000 in 2001, in these restated financial statements, which includes the recapture of excess compensation expense related to the items discussed in the following two paragraphs.

Sonus also determined that option grants made to certain newly hired employees had intrinsic value on the date of grant. APB No. 25, *Accounting for Stock Issued to Employees*, requires that such intrinsic value be recorded as deferred stock−based compensation and amortized over the vesting period. Previously, Sonus had not recorded any deferred stock−based compensation expense for these grants, and Sonus is now recording an adjustment of $1,215,000 to deferred compensation and additional paid−in−capital in 2001. As a result and under our policy of amortization under FIN 28, Sonus has increased stock−based compensation expense by $380,000 in 2002 and $408,000 in 2001, in these restated financial statements.

Sonus recorded employee deferred stock−based compensation prior to our initial public offering and in connection with its acquisition of TTI, and established a policy to amortize these amounts on an accelerated method under FIN 28. Sonus determined as a result of its review and analysis that the deferred stock−based compensation related to one category of employees was incorrectly amortized using the straight−line method and has made adjustments to consistently apply the FIN 28 method. As a result, Sonus decreased stock−based compensation by $193,000 in 2002 and increased such compensation by $1,690,000 in 2001, in these restated financial statements.

In October 2002, Sonus commenced an offer to exchange outstanding employee stock options for new stock options to be granted by it. Sonus had previously recorded deferred stock−based compensation for options issued prior to its initial public offering, and in conjunction with the exchange offer reversed any remaining unamortized deferred compensation to capital in excess of par value. Sonus has determined as a result of its review and analysis that, in accordance with FIN 44, Sonus should have expensed any remaining deferred stock−based compensation associated with options exchanged under this offer. As a result, Sonus has recognized additional stock−based compensation expense of $562,000 for 2002.

Sonus has determined that it improperly calculated deferred stock−based compensation and the related amortization associated with the restricted stock issued under the TTI Retention Plan. As a result, Sonus has also recorded an increase in 2002 of $1,353,000 and a decrease in 2001 of $739,000 to stock−based compensation expense to reflect the amortization of deferred stock−based compensation that should have been recorded.

Sonus also determined that it improperly calculated stock−based compensation expense for any intrinsic value associated with the modification of certain stock options and restricted stock to accelerate the vesting of a portion or all of these awards in connection with certain employee terminations. These adjustments resulted in increases in stock−based compensation expense of $200,000 in 2002 and $452,000 in 2001.

The following table is a summary of stock−based compensation restatement adjustments by type for the periods indicated, in thousands:

	Year ended Dec. 31, 2002	Year ended Dec. 31, 2001
Stock−based Compensation Adjustments—increase/(decrease) for:		
Recapture of compensation expense in connection with employee terminations	$ (4,926)	$ (3,179)
Amortization related to the intrinsic value of options granted to new employees	380	408
Adjusted amortization under accelerated method prescribed by FIN 28	(193)	1,690
Compensation charge related to options cancelled under Exchange Program	562	—
Amortization related to restricted stock issued in connection with TTI Retention Plan	1,353	(739)
Charge for modification in connection with employee terminations	200	452
Total Stock−based Compensation Restatement Adjustments	$ (2,624)	$ (1,368)

As described in Note 1 (m) to Sonus' consolidated financial statements, Sonus calculated the fair value of its stock options and the options under its employee stock purchase plan for disclosure purposes as required under SFAS No. 123, *Accounting for Stock−Based Compensation.* These calculations depend, among other factors, on the characteristics of Sonus' ESPP and options with intrinsic value at the grant date. Sonus' calculation did not properly consider these two items.

Sonus has also identified and recorded certain adjustments related to certain stock option activity that had not been previously accounted for or had been previously accounted for in an incorrect period. As a result, Sonus has made adjustments to the summary of stock option activity in Note 14 to its consolidated financial statements.

Inventory Reserves

As of December 31, 2002 and 2001 Sonus' originally reported excess, obsolete and evaluation reserve balances were $17,784,000 and $9,629,000, respectively. Sonus has determined that its excess, obsolete and evaluation reserve balances were not consistently calculated and, as a result of its review of these reserves and consideration of contemporaneous facts and circumstances, Sonus increased its reserves and charged cost of product revenues by $522,000 and $3,297,000 as of and for the years ended December 31, 2002 and 2001.

Other Balance Sheet Adjustments

Sonus identified certain customer checks received by it prior to the end of fiscal year 2002, which were deposited after the reporting period and not recorded in the period received. Accordingly, Sonus has increased its cash and cash equivalents and deferred revenue balances by $6,971,000 as of December 31, 2002.

Sonus previously did not record deferred revenue for product shipments and related services for which customers had been invoiced but for which no revenue was recognized and for which payment had not been collected. In this restatement, customer billings for which Sonus has a contractual right to invoice and collectibility is probable have been recorded as accounts receivable on the balance sheet, with a corresponding increase to deferred revenue. Accounts receivable and deferred revenue have increased by $90,000 at December 31, 2002.

Sonus previously reported customer deposits as accrued liabilities. As restated, Sonus has determined that it should report customer deposits as deferred revenue rather than accrued expenses. Accordingly, deferred revenue has increased and accrued liabilities have decreased by $7,240,000 as of December 31, 2002.

Other Statement of Operations Adjustments

As described in Note 1 (q) to Sonus' consolidated financial statements, Sonus calculated the weighted average common shares outstanding utilized in the determination of loss per share in accordance with the treasury stock method as required under SFAS No. 148, *Earnings Per Share*. Sonus' calculation did not properly consider certain activity and, accordingly, Sonus has modified the weighted average common shares outstanding for 2002 and 2001.

Summary of Restatement Items

The following condensed consolidated statements of operations for the years ended December 31, 2002 and 2001, on a comparative basis, summarize the effects of the restatement adjustments on various line items of Sonus' statements of operations for the periods indicated.

Condensed Statements of Operations
As Reported and As Restated
(In thousands, except per share data)

	Year Ended December 31, 2002			Year Ended December 31, 2001		
	As Reported	Adjustments	As Restated	As Reported	Adjustments	As Restated
Revenues	$ 62,558	$ 31,359	$ 93,917	$ 173,199	$ (44,399)	$ 128,800
Cost of revenues	40,302	11,274	51,576	75,698	(12,920)	62,778
Gross profit	22,256	20,085	42,341	97,501	(31,479)	66,022
Operating expenses	92,044	25,370	117,414	747,940	(41,350)	706,590
Loss from operations	(69,788)	(5,285)	(75,073)	(650,439)	9,871	(640,568)
Interest income, net	1,318	—	1,318	5,007	(58)	4,949
Loss before income taxes	(68,470)	(5,285)	(73,755)	(645,432)	9,813	(635,619)
Provision for income taxes	—	86	86	—	—	—
Net loss	$ (68,470)	$ (5,371)	$ (73,841)	$ (645,432)	$ 9,813	$ (635,619)
	&sp;					
Net loss per share	$ (0.36)	$ (0.03)	$ (0.39)	$ (3.74)	$ 0.06	$ (3.68)

(3) Restructuring Charges

Commencing in the third quarter of fiscal 2001 and extending through fiscal 2002, in response to unfavorable business conditions primarily caused by significant reductions in capital spending by telecommunications service providers, Sonus implemented restructuring actions designed to reduce expenses and align its cost structure with its revised business outlook. The restructuring actions included worldwide workforce reductions, consolidation of excess facilities and the write−off of inventory and purchase commitments.

2002 Restructuring Activity

Sonus' restructuring activities for fiscal 2002 are summarized as follows in thousands:

	2002 Activity							
	Restructuring Charges	Cash Payments	Adjustments	Dec. 31, 2002 Accrual Balance	Cash Payments	Dec. 31, 2003 Accrual Balance	Current Portion	Long−term Portion
				As Restated				
Workforce reduction	$ 5,282	$ (4,748)	$ —	$ 534	$ (534)	$ —	$ —	$ —
Consolidation of facilities	3,332	(1,002)	(116)	2,214	(1,071)	1,143	344	799
Sub−total	8,614	(5,750)	(116)	2,748	(1,605)	1,143	344	799
Write−off (benefit) of purchase commitments	2,408	(1,333)	(735)	340	(300)	40	40	—
Total	$ 11,022	$ (7,083)	$ (851)	$ 3,088	$ (1,905)	$ 1,183	$ 384	$ 799

The remaining cash expenditures relating to the consolidation of excess facilities are expected to be paid through 2008. The remaining purchase commitment obligations were paid in the first quarter of fiscal 2004.

(a) Workforce reduction

The restructuring actions in fiscal 2002 resulted in a reduction of Sonus' workforce by approximately 230 employees, or 39%. The affected employees were entitled to severance and other

benefits for which Sonus recorded a charge of $5,282,000 in fiscal 2002. In addition in fiscal 2002, Sonus recorded non−cash, stock based compensation expense of $1,466,000 related to the write−off of deferred compensation associated with shares and options held by terminated employees.

(b) Consolidation of excess facilities

Sonus recorded a net restructuring charge in fiscal 2002 of $3,216,000 for the consolidation of excess facilities, which is included on the balance sheet in accrued restructuring expenses and long−term obligations. The accrual for the consolidation of excess facilities was determined assuming no sublease income.

(c) Write−off (benefit) of inventory and purchase commitments

During fiscal 2002, Sonus recorded additional cost of revenues of $6,130,000, consisting of $4,457,000 for the write−off of inventory determined to be excess and obsolete and $1,673,000 for materials that were committed to be purchased from third−party contract manufacturers and suppliers under purchase commitments, but that were in excess of required quantities. The charge for purchase commitments was recorded on the balance sheet as accrued restructuring expenses.

2001 Restructuring Activity

Sonus' restructuring activities for fiscal 2001 are summarized as follows in thousands:

	2001 Activity				2002 Activity						
	Initial Restruc. Charges	Cash Payments	Non−Cash Benefit	Dec. 31, 2001 Accrual Balance	Cash Payments	Adjustments	Dec. 31, 2002 Accrual Balance	Cash Payments	Dec. 31, 2003 Accrual Balance	Current Portion	Long−term Portion
				As Restated			As Restated				
Workforce reduction	$ 3,509	$ (2,976)	$ —	$ 533	$ (533)	$ —	$ —	$ —	$ —	$ —	$ —
Consolidation of facilities and other charges (benefit)	20,369	(1,116)	(16,557)	2,696	(1,366)	(759)	571	(390)	181	181	$ —
Total	$ 23,878	$ (4,092)	$ (16,557)	$ 3,229	$ (1,899)	$ (759)	$ 571	$ (390)	$ 181	$ 181	$ —

Remaining cash expenditures relating to the consolidation of excess facilities and other miscellaneous charges are expected to be paid by the second quarter of fiscal 2004.

(a) Workforce reduction

The restructuring actions in fiscal 2001 resulted in the reduction of Sonus' workforce by approximately 150 employees, or 21%. The affected employees were entitled to severance and other benefits for which Sonus recorded a charge of $3,509,000 in fiscal 2001. In addition in fiscal 2001, Sonus recorded non−cash stock−based compensation expenses of $19,273,000 related to the write−off of deferred compensation associated with shares and options held by terminated employees.

(b) Consolidation of excess facilities and other charges (benefit)

Sonus recorded a restructuring charge in fiscal 2001 of $20,369,000 for the consolidation of excess facilities and other miscellaneous charges, which is included on the balance sheet in accrued restructuring expenses and long−term obligations. The accrual for the consolidation of excess facilities was determined assuming no sub−lease income.

In March 2002, Sonus' TTI subsidiary reduced its lease commitments for excess space in its Texas facilities in exchange for a one−time payment of $835,000 to a landlord and a guarantee by Sonus of TTI's rents owed through April 2003, the remainder of the revised lease term. As the reduction in lease commitments was estimable at December 31, 2001, Sonus recorded the restructuring benefit of $16,557,000 in fiscal 2001.

(4) Write−off of Goodwill and Purchased Intangible Assets

In accordance with SFAS No. 142, in response to unfavorable business conditions, Sonus re−evaluated the fair value of goodwill established in connection with its acquisitions of TTI and Linguatec in fiscal 2001 (Notes 5 and 6) with the assistance of an independent appraiser. The key assumption used in evaluating the value of intangible assets was forecasted revenues and related profit margin related to remaining customers acquired as a result of the acquisitions. Revenue and profit margin forecasts had declined significantly compared to expectations as of the acquisition date. As a result, recorded an aggregate non−cash impairment charge of $10,950,000 in fiscal 2002 for the write−off of the remaining goodwill established in connection with those acquisitions.

In fiscal 2001, in light of negative industry and economic conditions, a general decline in technology valuations and our decision to discontinue the development and use of certain acquired technology, Sonus performed an assessment of the carrying value of the goodwill and purchased intangible assets recorded in connection with our acquisition of TTI. The key assumptions used in evaluating the carrying value of intangible assets and goodwill included the allocation of goodwill proportionately to the identified intangible assets, significant declines in forecasted revenues and related profit margins related to remaining customers acquired as result of the acquisition, and a significant decline in the number of remaining employees from the acquired company. As a result, in accordance with SFAS No. 121, Sonus recorded a non−cash impairment charge of $392,387,000 in fiscal 2001 for the write−off of goodwill and certain purchased intangible assets because the estimated undiscounted future cash flows of these assets was less than the carrying value.

(5) Acquisition of telecom technologies, inc.

In January 2001, Sonus acquired privately−held TTI. Upon the closing of this acquisition, an aggregate of 10,800,000 shares of Sonus common stock (Merger Shares) were exchanged for all outstanding shares of TTI common stock. Of the 10,800,000 shares issued to the TTI stockholders, 1,200,000 shares were placed into escrow as security for indemnity obligations that were released to TTI stockholders on January 18, 2002. In addition to the Merger Shares, the TTI stockholders received in fiscal 2001, 4,200,000 additional shares of Sonus common stock upon the achievement of certain specified business expansion and product development milestones. Sonus also issued contingent awards of 3,000,000 shares of common stock under the 2000 Retention Plan to certain former TTI employees who became employees of Sonus (Note 14 (d)).

The acquisition of TTI was accounted for using the purchase method of accounting in accordance with APB No. 16, *Business Combinations*. Accordingly, the total purchase price was allocated to the assets acquired and liabilities assumed based upon their estimated fair values. The purchase price was determined by using the average market value of Sonus common stock for the period from two days before to two days after the announcement of the TTI acquisition ($41.61 per share) to value the Merger Shares at the closing date and adding the fair value of liabilities assumed and expenses of the acquisition. Additionally, since the closing date, the purchase price was increased as the 4,200,000

shares of common stock that were subject to milestone conditions were earned. The final purchase price was computed as follows, in thousands:

Fair market value of shares issued	$	527,001
Liabilities assumed		19,809
Acquisition expenses		5,766
	$	552,576

In accordance with APB No. 16 and with the assistance of valuation experts, the final purchase price was allocated to the tangible and intangible assets acquired based upon their fair values as follows, in thousands:

Tangible assets	$	9,392
Intangible assets:		
Workforce and developed technology		20,900
Customer relationships		24,200
In−process research and development		40,800
Deferred compensation related to unvested stock options		22,600
Goodwill		434,684
	$	552,576

Sonus engaged a third party appraiser to conduct a valuation of the tangible and intangible assets and to assist in the determination of the useful lives for such assets. Based on the results of the appraisal, $40,800,000 was allocated to in−process research and development, which was expensed in fiscal 2001. The amounts allocated to assembled workforce, developed technology, customer relationships and goodwill were planned to be amortized over their estimated useful lives of three to five years. During the years ended December 31, 2003, 2002 and 2001, amortization of goodwill and purchased intangible assets for the TTI acquisition was $2,408,000, $3,871,000 and $70,384,000. In fiscal 2002 and 2001, Sonus recorded non−cash impairment charges of $10,050,000 and $392,387,000 for the write−off of TTI goodwill and certain purchased intangible assets (Note 4). Deferred compensation was computed based on the intrinsic value of the unvested TTI stock options assumed by Sonus and is being expensed over the remaining vesting period of up to four years.

The valuation of in−process research and development was determined using the income method. Revenue and expense projections for the in−process development project were prepared by the management of Sonus through 2009 and the present value was computed using a discount rate of 23%. There was no alternative future use for the in−process technology. The assumptions used for the valuation of in−process research and development are the responsibility of management.

Pro Forma Information

The following unaudited pro forma information presents a summary of the consolidated results of operations of Sonus and TTI as if the acquisition had occurred on January 1, 2001. The pro forma adjustments exclude the one−time write−off of TTI in−process research and development for the year ended December 31, 2001, in thousands, except per share data.

Revenues	$	129,134
Net loss		(596,398)
Basic and diluted net loss per share	$	(3.44)

The pro forma results are not necessarily indicative of what would have occurred if the acquisition had been in effect for fiscal 2001. In addition, they are not intended to be a projection of future results and do not reflect any synergies from combining operations.

(6) Acquisition of Certain Assets of Linguateq, Inc.

In July 2001, Sonus completed the acquisition of certain intellectual property and other assets of privately−held Linguateq Incorporated. Linguateq was a provider of data distribution and billing application software for both next generation and legacy networks. The acquisition of certain intellectual property and other assets was accounted for using the purchase method of accounting in accordance with SFAS No. 141, *Business Combinations*. The purchase price was determined by using the average market value of Sonus common stock for the period from two days before to two days after the terms were agreed upon for the acquisition ($21.84 per share) to value the 221,753 Sonus common shares issued to the Linguateq stockholders at the closing date and adding payments to employees and vendors and expenses of the acquisition. The final purchase price was been computed as follows, in thousands:

Fair market value of shares issued	$	4,843
Payments to employees and vendors		241
Acquisition expenses		141
	$	5,225

In accordance with SFAS No. 142, and with the assistance of valuation experts, the purchase price was allocated to the intangible assets acquired based upon their fair values as follows, in thousands:

Intangible assets:		
Developed technology and customer relationships	$	700
In−process research and development		3,800
Goodwill		725
	$	5,225

Sonus engaged a third party appraiser to conduct a valuation of the intangible assets and to assist in the determination of useful lives for such assets. Based on the results of the appraisal, $3,800,000 was allocated to in−process research and development, which was expensed in fiscal 2001. During the years ended December 31, 2002 and 2001, amortization of purchased intangible assets for Linguateq was $358,000 and $167,000. In fiscal 2002, Sonus recorded a non−cash impairment charge of $900,000 for the write−off of Linguateq goodwill (Note 3).

The valuation of in−process research and development was determined using the income method. Revenue and expense projections for the in−process development project were prepared by the management of Sonus through 2006 and the present value was computed using a discount rate of 40%. In the event that the project was not completed and technological feasibility was not achieved, there was no alternative future use for the in−process technology. The assumptions used for the valuation of in−process research and development are the responsibility of management.

Pro forma information related to the consolidated results of operations of Sonus and Linguateq were not material for 2001 and 2000.

(7) Other Balance Sheet Data

(a) Accounts Receivable

Accounts receivable consists of the following, in thousands:

	December 31, 2003	December 31, 2002 As Restated
Earned accounts receivable	$ 11,326	$ 4,873
Unearned accounts receivable	12,713	90
Accounts receivable, gross	24,039	4,963
Allowance for doubtful accounts	(285)	(341)
Accounts receivable, net	$ 23,754	$ 4,622

(b) Inventory

Inventory consists of the following, in thousands:

	December 31, 2003	December 31, 2002 As Restated
On−hand final assemblies and finished goods inventory	$ 11,366	$ 12,292
Unearned inventory	10,173	10,441
Evaluation inventory	6,014	6,022
Inventory, gross	27,553	28,755
Excess, obsolete and evaluation reserve	(13,814)	(18,306)
Inventory, net	$ 13,739	$ 10,449

(c) *Property and Equipment*

Property and equipment consists of the following, in thousands:

	Estimated Useful Life	December 31, 2003	December 31, 2002 As Restated
Equipment and software	2−3 years	$ 50,966	$ 47,797
Furniture and fixtures	3−5 years	579	579
Leasehold improvements	Life of lease	2,592	2,574
		54,137	50,950
Less accumulated depreciation		(49,128)	(39,404)
Property and equipment, net		$ 5,009	$ 11,546

(d) *Accrued Expenses*

Accrued expenses consists of the following, in thousands:

	December 31, 2003	December 31, 2002 As Restated
Employee compensation and related costs	$ 4,351	$ 4,459
Employee stock purchase plan	821	515
Professional fees	6,208	2,106
Royalties	4,672	4,964
Warranty	2,500	1,300
Other	3,613	3,145
	$ 22,165	$ 16,489

(e) *Deferred Revenue*

Deferred revenue consists of the following, in thousands:

	December 31, 2003	December 31, 2002 As Restated
Maintenance and support contracts	$ 39,104	$ 24,832
Customer deposits	35,183	34,830
Unearned revenue	12,713	90
Total deferred revenue	87,000	59,752
Less current portion	(62,698)	(51,728)
	$ 24,302	$ 8,024

(8) Valuation and Qualifying Accounts

(a) Allowance for Doubtful Accounts

The following table sets forth activity in Sonus' allowance for doubtful accounts, in thousands:

Year ended December 31:	Balance at beginning of year	Charges (benefits) to costs and expenses	(Write−offs)/ recoveries	Balance at end of year
2003	$ 341	$ 170	$ (226)	$ 285
2002 (As Restated)	2,082	(1,683)	(58)	341
2001 (As Restated)	1,000	1,082	—	2,082

(b) Inventory Reserve

The following table sets forth activity in Sonus' inventory reserve, in thousands:

Year ended December 31:	Balance at beginning of year	Charges to costs and expenses	(Write−offs)/ recoveries	Balance at end of year
2003	$ 18,306	$ 5,806	$ (10,298)	$ 13,814
2002 (As Restated)	12,925	9,369	(3,988)	18,306
2001 (As Restated)	3,806	9,301	(182)	12,925

(c) Warranty Reserve

The following table sets forth activity in Sonus' warranty reserve accrual, included in accrued expenses, in thousands:

Year ended December 31:	Balance at beginning of year	Charges to costs and expenses	Deductions	Balance at end of year
2003	$ 1,300	$ 1,200	$ —	$ 2,500
2002 (As Restated)	2,100	—	(800)	1,300
2001 (As Restated)	1,543	557	—	2,100

(9) Income Taxes

Sonus provides for income taxes in accordance with SFAS No. 109, *Accounting for Income Taxes.* Deferred tax assets and liabilities are determined based on differences between the financial statement and tax bases of assets and liabilities using enacted tax rates.

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amount of assets and liabilities for financial reporting purposes and the amounts for income tax purposes. A valuation allowance has been recorded for the net deferred tax asset due to the uncertainty of realizing the benefit of this asset.

The following is a summary of the significant components of Sonus' deferred tax assets and liabilities, in thousands:

	December 31,	
	2003	2002
		As Restated
Net operating loss carryforwards	$ 71,763	$ 65,205
Tax credit carryforwards	9,687	8,187
Intangible assets	788	3
Deferred revenue	21,006	13,121
Accrued expenses	313	1,613
Inventory reserves	5,512	7,566
Other temporary differences	(4,325)	353
Valuation allowance	(104,744)	(96,048)
	$ —	$ —

As of December 31, 2003, Sonus has net operating loss carryforwards for federal income tax purposes of approximately $190,000,000 that expire through 2023. Approximately $51,000,000 of the net operating loss is attributable to stock option deductions; upon utilization of this portion of the deferred tax asset the benefit will be accounted for as an increase to capital in excess of par value. Sonus also has available research and development credit carryforwards of approximately $9,700,000 that expire through 2023. The Internal Revenue Code (IRC) contains provisions that limit the net operating loss and tax credit carryforwards available to be used in any given year in the event of certain circumstances, including significant changes in ownership interests. Sonus has completed several financings since inception and may have incurred ownership changes as defined in the IRC. Sonus does not believe that these changes have had a material impact on its ability to use its net operating loss and tax credit carryforwards.

Income tax (benefit) expense differed from the amounts computed by applying the U.S. statutory income tax rate to pre−tax income as a result of the following:

	2003	2002	2001
Statutory income tax (benefit) expense	(35.0)%	(35.0)%	(35.0)%
State income taxes, net of federal benefit	(4.5)	(4.5)	(4.5)
Foreign income taxes	1.1	—	—
Stock−based compensation	6.5	10.5	4.2
Research and development credits	(9.8)	(2.3)	(0.3)
Goodwill amortization	—	—	24.9
Valuation allowance	44.0	34.3	6.4
Other, net	(0.3)	(2.9)	4.3
Effective income tax rate	2.0%	0.1%	—%

The current provision for income taxes consists of the following, in thousands:

	2003	2002	2001
Federal	$ —	$ —	$ —
State	130	86	—
Foreign	172	—	—
Total	$ 302	$ 86	$ —

(10) Long−term Liabilities

Long−term liabilities consist of capital leases, equipment borrowings from a bank (Note 11) and restructuring expenses. Sonus assumed certain capital leases as part of the acquisition of TTI. The capital leases are due in monthly installments expiring at various dates through March 2005 and accrue interest at annual rates ranging from 4.8% to 10.3%. The future minimum annual payments under capital leases and amounts due for long−term liabilities are as follows, in thousands:

	December 31,	
	2003	2002
		As Restated
Capital Leases:		
2003	$ —	$ 548
2004	189	193
2005	30	31
Total minimum lease payments	219	772
Less amount representing interest	(7)	(43)
Present value of minimum payments	212	729
Equipment borrowings from bank	—	2,842
Long−term portion of restructuring expenses	799	1,328
Total long−term liabilities	1,011	4,899
Less current portion	(182)	(1,606)
Total long−term liabilities	$ 829	$ 3,293

The future principal payments on long−term liabilities, excluding the capital leases, as of December 31, 2003 are as follows: $187,000 in 2005; $195,000 in 2006; $204,000 in 2007; and $213,000 in 2008.

(11) Bank Agreement

In January 2002, Sonus established a $10,000,000 equipment line of credit and a $20,000,000 working capital line of credit with a bank, at the bank's prime rate. In March 2003, Sonus extended these existing lines of credit at the bank's prime rate (4.0% at December 31, 2003). The lines of credit expired in March 2004 and were not renewed. Amounts borrowed under the equipment line were repayable over a 36−month period. For both lines of credit, Sonus had to comply with certain restrictive covenants including maintaining certain minimum investment balances with the bank, a minimum tangible stockholders' equity of $131,000,000 as of December 31, 2003 and a quick ratio of 1.5 to 1.0, as defined in the credit agreement. Pursuant to the terms of the agreement, the minimum tangible stockholders' equity covenant increased by fifty percent (50%) of the amount of the additional equity financing received by Sonus in its 2003 public offerings. Under the agreement, all of Sonus' assets, except intellectual property, had been pledged as collateral. As of December 31, 2003, Sonus had no amounts outstanding under the equipment line of credit (Note 10). Interest expense related to the line of credit was $104,000 for 2003 and $134,000 for 2002.

(12) Convertible Subordinated Note

In May 2001, Sonus completed a private placement of an aggregate principal amount of $10,000,000 of 4.75% convertible subordinated notes, due May 1, 2006, with a customer. Interest payments are due semi−annually on May 1 and November 1 of each year through May 2006. The notes may be converted by the holder into shares of Sonus' common stock at any time before their maturity or prior to their redemption or repurchase by Sonus. The conversion rate is 33.314 shares per each $1,000 principal amount of notes, subject to adjustment in certain circumstances. After May 1, 2004, Sonus has the option to redeem all or a portion of the notes at 100% of the principal amount. Also, at any time if the market price of Sonus' common stock exceeds $60.04 per share for twenty trading days in any thirty trading−day period, Sonus may redeem these notes through the issuance of shares of common stock or for cash. In the event of a change of control in Sonus, the holder at its option may require Sonus to redeem the notes through the issuance of common stock or cash. Interest expense related to our convertible subordinated notes was $475,000 for 2003 and 2002 and $317,000 for 2001.

(13) Commitments and Contingencies

(a) Leases

Sonus leases its facilities under operating leases, which expire through December 2008. Sonus is responsible for certain real estate taxes, utilities and maintenance costs under these leases. In October 2003, Sonus entered into a sublease agreement (Sublease) for a new corporate headquarters facility with rent commencing in April 2004 and extending through January 2007. Rent expense was $2,638,000, $3,267,000 and $4,146,000 for 2003, 2002 and 2001. The future minimum payments under operating lease arrangements as of December 31, 2003, including the new Sublease, are as follows: $1,693,000 in 2004; $1,068,000 in 2005; $876,000 in 2006; $261,000 in 2007; and $213,000 in 2008.

(b) Pending Litigation and Claims

In November 2001, a purchaser of Sonus' common stock filed a complaint in the federal district court for the Southern District of New York against Sonus, two of its officers and the lead underwriters alleging violations of the federal securities laws in connection with Sonus' initial public offering (IPO) and seeking unspecified monetary damages. The purchaser seeks to represent a class of persons who purchased Sonus' common stock between the IPO on May 24, 2000 and December 6, 2000. An amended complaint was filed in April 2002. The amended complaint alleges that Sonus' registration statement contained false or misleading information or omitted to state material facts concerning the alleged receipt of undisclosed compensation by the underwriters and the existence of undisclosed arrangements between underwriters and certain purchasers to make additional purchases in the after market. The claims against Sonus are asserted under Section 10(b) of the Securities Exchange Act of 1934 and Section 11 of the Securities Act of 1933 and against the individual defendants under Sections 11 and 15 of the Securities Act. Other plaintiffs have filed substantially similar class action cases against approximately 300 other publicly traded companies and their IPO underwriters which, along with the actions against Sonus, have been transferred to a single federal judge for purposes of coordinated case management. On July 15, 2002, Sonus, together with the other issuers named as defendants in these coordinated proceedings, filed a collective motion to dismiss the consolidated amended complaints on various legal grounds common to all or most of the issuer defendants. The plaintiffs voluntarily dismissed the claims against the individual defendants, including those Sonus officers named in the complaint. On February 19, 2003, the court granted a portion of the motion to dismiss by dismissing the Section 10(b) claims against certain defendants including Sonus, but denied the remainder of the

motion as to the defendants. Accordingly, the case proceeded against Sonus on the Section 11 claims. In June 2003, a special committee of Sonus' Board of Directors authorized Sonus to enter into a proposed settlement with the plaintiffs on terms substantially consistent with the terms of a Memorandum of Understanding negotiated among representatives of the plaintiffs, the issuer defendants and the insurers for the issuer defendants. The settlement contemplated by the Memorandum of Understanding is subject to a number of conditions including approval by the court. It remains uncertain whether and when the conditions will be met and the settlement will become final. Sonus does not expect that the settlement contemplated by the Memorandum of Understanding would have a material impact on Sonus' business or financial results.

Beginning in July 2002, several purchasers of Sonus' common stock filed complaints in federal district court for the District of Massachusetts against Sonus, certain officers and directors and a former officer under Sections 10(b) and 20(a) and Rule 10b−5 of the Securities Exchange Act of 1934 (Class Action Complaints). The purchasers seek to represent a class of persons who purchased common stock of Sonus between December 11, 2000 and January 16, 2002, and seek unspecified monetary damages. The Class Action Complaints were essentially identical and alleged that Sonus made false and misleading statements about its products and business. On March 3, 2003, the plaintiffs filed a Consolidated Amended Complaint. On April 22, 2003, Sonus filed a motion to dismiss the Consolidated Amended Complaint on various grounds. On May 11, 2004, the court held oral argument on the motion, at the conclusion of which the court denied Sonus' motion to dismiss. The case is proceeding to class certification and discovery. Sonus believes the claims in the Consolidated Amended Complaint are without merit and that it has substantial legal and factual defenses, which it intends to pursue vigorously. There is no assurance Sonus will prevail in defending these actions.

Beginning in February 2004, a number of purported shareholder class action complaints were filed in the United States District Court for the District of Massachusetts against Sonus and certain of its current officers and directors. The complaints assert claims under the federal securities laws, specifically Sections 10(b) and 20(a) of the Securities Exchange Act of 1934, relating to Sonus' announcement that it had identified issues, practices and actions of certain employees relating to both the timing of revenue recognized from certain customer transactions and other financial statement accounts, which could affect its 2003 financial statement accounts and possibly financial statements for prior periods. Specifically, these actions allege that Sonus issued a series of false or misleading statements to the market during the class period that failed to disclose that (i) Sonus had materially overstated its revenue by improperly recognizing revenue on certain customer contracts; (ii) Sonus lacked adequate internal controls and was therefore unable to ascertain its true financial condition; and (iii) as a result of the foregoing, Sonus' financial statements issued during the class period were materially false and misleading. Plaintiffs contend that such statements caused Sonus' stock price to be artificially inflated. The complaints seek unspecified damages on behalf of a purported class of purchasers of Sonus' common stock during the period from April 9, 2003, June 3, 2003 or June 5, 2003 through February 11, 2004. On June 28, 2004, the court consolidated the claims. Sonus believes that it has substantial legal and factual defenses to the claims, which it intends to pursue vigorously. There is no assurance Sonus will prevail in defending these actions.

In February 2004, two purported shareholder derivative lawsuits were filed in the United States District Court for the District of Massachusetts against Sonus and certain of its officers and directors, naming Sonus as a nominal defendant. Also in February 2004, two purported shareholder derivative lawsuits were filed in the business litigation session of the superior court of Suffolk County of Massachusetts against Sonus and certain of Sonus' directors and officers, also naming Sonus as a nominal defendant. The suits claim that certain of Sonus' officers and directors breached their fiduciary

duties to Sonus' stockholders and to the company. The complaints are derivative in nature and do not seek relief from Sonus. However, Sonus has entered into indemnification agreements in the ordinary course of business with certain of the defendant officers and directors and may be obligated throughout the pendency of these actions to advance payment of legal fees and costs incurred by the defendants pursuant to Sonus' obligations under the indemnification agreements and/or applicable Delaware law. Sonus filed a motion to dismiss the state court cases and a motion to stay the federal action pending the outcome of the motion to dismiss in state court. On June 11, 2004, the state court held oral argument on the motion and took the matter under advisement. Discovery has been stayed pending the outcome of the motion to dismiss. Sonus believes that it has substantial legal and factual defenses to the claims, which it intends to pursue vigorously. There is no assurance Sonus will prevail in defending these actions.

In June 2004, Sonus received a formal order of private investigation from the SEC. Sonus is cooperating with the investigation. There can be no assurance as to the outcome of the SEC investigation. Sonus may incur substantial costs in connection with the investigation including fines and significant legal expenses.

Sonus has been contacted by third parties, who claim that Sonus' products infringe on certain intellectual property of the third party. Sonus evaluates these claims and accrues for royalties when the amounts are probable and reasonably estimable. While Sonus believes that the amounts accrued for estimated royalties are adequate, the amounts required to ultimately settle royalty obligations may be different.

(14) Stockholders' Equity

(a) Public Offerings

In September 2003, Sonus completed a public offering of 17,000,000 shares of its common stock at $7.75 per share, resulting in net proceeds of $126,088,000 after deducting offering costs of $5,662,000.

In April 2003, Sonus completed a public offering of 20,000,000 shares of its common stock at $3.05 per share, resulting in net proceeds of $56,730,000 after deducting offering costs of $4,270,000.

(b) 1997 Stock Incentive Plan

On January 1 of each year, the aggregate number of shares of common stock available for issuance under the 1997 Stock Incentive Plan (Plan) shall increase by the lesser of (i) 5% of the outstanding shares on December 31 of the preceding year or (ii) an amount determined by the Board of Directors. As of December 31, 2003, 110,611,642 shares were authorized and 35,051,143 shares were available under the Plan for future issuance.

Sonus issued shares of restricted common stock to employees and consultants which are subject to repurchase agreements and generally vest over a four or five−year period. If the employee leaves or if the services are not performed, Sonus may repurchase any restricted shares of common stock held by these individuals at their original purchase price ranging from $0.01 to $4.67 per share. All shares of common stock subject to repurchase restrictions contain the same rights and privileges as unrestricted shares of common stock and are presented as outstanding as of the date of issuance. As of December 31, 2003, 1,058,045 shares of the outstanding common stock issued under the Plan were restricted and subject to Sonus' right to repurchase.

On October 16, 2002, Sonus commenced its Exchange Offer for outstanding employee stock options granted under the Plan having an exercise price of $0.67 or more per share for new stock

options to be granted by Sonus. Outstanding options granted under the TTI Amended and Restated 1998 Equity Incentive Plan were not eligible for exchange. Also, Sonus' directors, executive officers and non−employees were not eligible to participate in the exchange. On November 22, 2002, the Exchange Offer expired. Outstanding options to purchase approximately 8,973,000 shares of common stock were accepted for exchange and cancelled. On May 27, 2003, employees received an option to purchase one share of common stock for each share of common stock under the exchanged options. The new options were granted at an exercise price of $4.08 per share, which represented the fair market value of Sonus' common stock on the date of grant.

A summary of activity under the Plan for the years ended December 31, 2001, 2002 and 2003, is as follows:

Restricted Common Stock Issuances

	Number of Shares	Purchase Price	Weighted Average Purchase Price
Outstanding, December 31, 2000	43,020,654	$ 0.01−4.67	$ 0.21
Repurchased	(241,250)	0.07−0.16	0.08
Outstanding, December 31, 2001	42,779,404	0.01−4.67	0.20
Repurchased	(1,063,999)	0.01−4.00	0.17
Outstanding, December 31, 2002	41,715,405	0.01−4.67	0.20
Repurchased	(30,100)	0.16−0.22	0.20
Outstanding, December 31, 2003	41,685,305	$ 0.01−4.67	$ 0.19
&sp;			
Unrestricted common stock, December 31, 2003	40,627,260	$ 0.01−4.67	$ 0.19
Unrestricted common stock, December 31, 2002	34,834,854	$ 0.01−4.67	$ 0.35
Unrestricted common stock, December 31, 2001	26,504,307	$ 0.01−4.67	$ 0.05

Common Stock Option Grants

	Number of Shares	Exercise Price	Weighted Average Exercise Price
Outstanding, December 31, 2000	17,837,422	$ 0.01−22.25	$ 9.16
Granted (As Restated)	6,291,093	2.60−29.00	12.95
Canceled (As Restated)	(2,009,805)	0.07−22.25	15.33
Exercised (As Restated)	(1,703,650)	0.07−22.25	2.36
Outstanding, December 31, 2001 (As Restated)	20,415,060	0.01−29.00	15.98
Granted (As Restated)	5,958,300	0.25−3.91	2.79
Canceled(1) (As Restated)	(13,484,486)	0.01−22.25	11.85
Exercised (As Restated)	(475,901)	0.07−3.33	0.34
Outstanding, December 31, 2002 (As Restated)	12,412,973	0.01−29.00	5.42
Granted	20,247,276	1.18−7.65	4.35
Canceled	(2,329,386)	0.67−22.25	8.55
Exercised	(2,194,369)	0.07−4.67	2.71
Outstanding, December 31, 2003	28,136,494	$ 0.01−29.00	$ 4.60
Exercisable, December 31, 2003	9,780,521	$ 0.01−29.00	$ 4.68
Exercisable, December 31, 2002 (As Restated)	6,079,842	$ 0.01−29.00	$ 5.46
Exercisable, December 31, 2001 (As Restated)	5,261,391	$ 0.01−22.25	$ 9.12

(1) Of the 13,484,486 options canceled in 2002, 8,973,160 were in connection with the Exchange Offer. Employees received an option to purchase one share of common stock for each option to purchase one share of common stock that was canceled. Sonus issued new options in exchange for such tendered options on May 27, 2003.

The weighted average fair value of each option granted under the Plan for 2003, 2002 and 2001 is $3.76, $2.58 and $12.22 per share.

The following table summarizes information relating to currently outstanding and exercisable options as of December 31, 2003:

	Outstanding			Exercisable	
Exercise Price	Number of Shares	Weighted Average Remaining Contractual Life (Years)	Weighted Average Exercise Price	Number of Shares	Weighted Average Exercise Price
$0.01	22,687	4.29	$ 0.01	22,687	$ 0.01
0.07	501,373	5.21	0.07	457,436	0.07
0.16−0.22	219,187	5.90	0.19	129,062	0.20
0.25	667,615	8.81	0.25	123,285	0.25
0.67	394,175	6.05	0.67	377,562	0.67
1.18	37,500	9.10	1.18	10,000	1.18
1.58−2.13	103,400	9.00	1.96	28,400	1.87
2.51−3.33	3,980,982	5.97	3.16	3,512,169	3.17
3.91−5.76	19,833,025	8.03	4.31	3,803,257	4.17
6.60−7.67	523,000	9.40	7.31	79,413	7.51
13.88−19.00	1,790,750	7.26	13.98	1,192,576	13.97
22.25−29.00	62,800	7.16	25.47	44,674	25.18
	28,136,494	7.64	$ 4.60	9,780,521	$ 4.68

(c) 2000 Employee Stock Purchase Plan

On January 1 of each year, the aggregate number of shares of common stock available for purchase under the ESPP shall increase by the lesser of (i) 2% of the outstanding shares on December 31 of the preceding year or (ii) an amount determined by the Board of Directors. As of December 31, 2003, 15,444,657 shares were authorized and 12,138,327 shares were available under the ESPP for future issuance.

(d) 2000 Retention Plan

In January 2001 in conjunction with the acquisition of TTI, Sonus established the 2000 Retention Plan (the Retention Plan) and issued contingent awards of 3,000,000 shares of common stock to certain employees of TTI who became employees of Sonus. Pursuant to the Retention Plan, these awards were scheduled to vest in equal installments on each of October 31, 2002, November 30, 2002, January 31, 2003 and February 28, 2003, if (i) the recipients did not voluntarily terminate employment with TTI or Sonus prior to such vesting dates and (ii) the business expansion and product development escrow release conditions were satisfied in whole or in part. Generally, any awards forfeited by employees who have terminated employment with TTI, other than a termination by Sonus or TTI without cause, prior to the date on which they would otherwise vest, were reallocated to remaining TTI employees, awarded to replacement hires or returned to Sonus as provided by the terms of the Retention Plan. All of the Retention Plan shares were made available for distribution as of December 31, 2002.

(e) 1998 Equity Incentive Plan

In January 2001 in connection with the completion of the TTI acquisition, Sonus assumed TTI's 1998 Equity Incentive Plan and all grants of options under this plan. Each outstanding option to purchase shares of TTI Class B common stock granted under the 1998 Equity Incentive Plan

immediately prior to the effective time of the acquisition was converted into an option to purchase Sonus common stock based on the merger consideration, with the exercise price of the options being proportionately adjusted.

In continuation of a 1997 agreement entered into by the TTI founders and other TTI shareholders, the founders agreed, in exchange for the option exercise proceeds, to transfer to Sonus a number of shares of Sonus' common stock received by them in the acquisition equal to the number of shares of Sonus' common stock issued upon exercise by former TTI employees of the stock options granted under the TTI 1998 Equity Incentive Plan. As a result of this agreement, the aggregate number of outstanding shares of Sonus' common stock that will be issued upon exercise of these stock options will not increase.

(f) Stock−based Compensation

Stock based compensation expenses include the amortization of deferred employee compensation and other equity related expenses for non−employees.

In connection with certain employee stock option grants and the issuance of employee restricted common stock during the years ended December 31, 2000 and 1999, Sonus recorded deferred stock based compensation of $39,433,000 and $20,859,000. This represents the aggregate difference between the exercise price or purchase price and the fair value of the common stock on the date of grant or sale for accounting purposes. The deferred compensation is recognized as an expense over the vesting period of the underlying stock options and restricted common stock based on the accelerated method prescribed by FIN 28.

In connection with the TTI acquisition, Sonus recorded deferred stock based compensation of $22,600,000 for the year ended December 31, 2001, related to the intrinsic value of unvested TTI stock options assumed by Sonus. This deferred compensation is recognized as an expense over the remaining vesting period of the underlying stock options of up to four years. Additionally, Sonus recorded $55,438,000 of deferred stock based compensation on 3,000,000 shares awarded to TTI employees under the Retention Plan, based on the fair value of the Sonus common stock on the closing date of the acquisition. This deferred compensation has been fully expensed as of December 31, 2002 (See Note 14 (d)).

Sonus has valued the stock options and the issuances of restricted common stock to non−employees based upon the fair market value of the services rendered where Sonus believes the value of these services is more readily determinable than the value of the options or restricted stock.

Sonus recorded stock based compensation of $3,418,000, $16,871,000 and $74,132,000 for the years ended December 31, 2003, 2002 and 2001. Stock based compensation expense for the years ended December 31, 2003, 2002 and 2001 is net of $229,000, $4,926,000 and $3,179,000 related to the recapture of accelerated expense with respect to shares held by terminated employees. In 2002, stock−based compensation expense included $562,000 relating to the exchange of outstanding employee stock options for new stock options granted by Sonus. Sonus expects to record approximately $564,000 in employee stock based compensation expense in the year ending December 31, 2004.

(g) Common Stock Reserved

Common stock reserved for future issuance at December 31, 2003 consist of the following:

Stock incentive plan	63,187,637
Employee stock purchase plan	12,138,327
Conversion of convertible subordinated note	333,140
	75,659,104

(15) Employee Benefit Plan

In 1998, Sonus adopted a savings plan for its employees, which has been qualified under Section 401(a) of the Internal Revenue Code. Eligible employees are permitted to contribute to the 401(k) plan through payroll deductions within statutory and plan limits. Contributions from Sonus are made at the discretion of the Board of Directors. Sonus has made no contributions to the 401(k) plan to date.

(16) Supplemental Cash Flow Information

	Year ended December 31,		
	2003	2002	2001
		As Restated	As Restated
		(in thousands)	
Supplemental disclosure of cash flow information:			
Cash paid during the year for interest	$ 610	$ 676	$ 546
Acquisition of telecom technologies, inc.			
Tangible assets	$ —	$ —	$ 9,392
Liabilities assumed	—	—	(19,809)
Goodwill, purchased intangible assets and deferred compensation related to unvested stock options	—	—	543,184
Issuance of common stock in connection with the acquisition	—	—	(527,001)
Cash acquired	—	—	(90)
Acquisition, net of cash acquired	—	—	5,676
Acquisition of certain assets of Linguateq, Inc.,			
Goodwill and purchased intangible assets	—	—	5,225
Issuance of common stock in connection with the acquisition	—	—	(4,843)
Acquisition	—	—	382
Total acquisitions, net of cash acquired	$ —	$ —	$ 6,058

(17) Restatement

The accompanying consolidated financial data set forth below presents our consolidated statements of operations for the years ended December 31, 2002 and 2001 and our consolidated balance sheet as of December 31, 2002 showing the amounts previously reported, adjustments and as restated.

Consolidated Statement of Operations
(In thousands, except per share data)

	Year Ended December 31, 2002		
	As Reported	Adjustments	As Restated
Revenues:			
Product	$ 41,395	$ 27,177	$ 68,572
Service	21,163	4,182	25,345
Total revenues	62,558	31,359	93,917
Cost of revenues:			
Write−off inventory and purchase commitments	9,434	(3,304)	6,130
Product	19,535	14,038	33,573
Service	11,333	540	11,873
Total cost of revenues	40,302	11,274	51,576
Gross profit	22,256	20,085	42,341
Operating expenses:			
Research and development	45,308	(717)	44,591
Sales and marketing	27,863	(77)	27,786
General and administrative	6,141	(893)	5,248
Stock−based compensation	19,495	(2,624)	16,871
Amortization of goodwill and purchased intangible assets	1,514	2,715	4,229
Write−off of goodwill and purchased intangible assets	1,848	9,102	10,950
Restructuring charges (benefit), net	(10,125)	17,864	7,739
Total operating expenses	92,044	25,370	117,414
Loss from operations	(69,788)	(5,285)	(75,073)
Interest expense	(676)	—	(676)
Interest income	1,994	—	1,994
Loss before income taxes	(68,470)	(5,285)	(73,755)
Provision for income taxes	—	86	86
Net loss	$ (68,470)	$ (5,371)	$ (73,841)
Basic and diluted net loss per share	$ (0.36)	$ (0.03)	$ (0.39)
Shares used in computing net loss per share	189,889	1,119	191,008

Consolidated Statement of Operations
(In thousands, except per share data)

	Year Ended December 31, 2001		
	As Reported	Adjustments	As Restated
Revenues:			
Product	$ 152,648	$ (48,002)	$ 104,646
Service	20,551	3,603	24,154
Total revenues	173,199	(44,399)	128,800
Cost of revenues:			
Product	56,222	(12,505)	43,717
Service	19,476	(415)	19,061
Total cost of revenues	75,698	(12,920)	62,778
Gross profit	97,501	(31,479)	66,022
Operating expenses:			
Research and development	65,004	(1,108)	63,896
Sales and marketing	42,267	(1,391)	40,876
General and administrative	13,068	(241)	12,827
Stock−based compensation	75,500	(1,368)	74,132
Amortization of goodwill and purchased intangible assets	107,759	(37,208)	70,551
Write−off of goodwill and purchased intangible assets	374,735	17,652	392,387
Restructuring charges, net	25,807	(18,486)	7,321
In−process research and development	43,800	800	44,600
Total operating expenses	747,940	(41,350)	706,590
Loss from operations	(650,439)	9,871	(640,568)
Interest expense	(567)	(58)	(625)
Interest income	5,574	—	5,574
Net loss	$ (645,432)	$ 9,813	$ (635,619)
Basic and diluted net loss per share	$ (3.74)	$ 0.06	$ (3.68)
Shares used in computing net loss per share	172,382	523	172,905

Consolidated Balance Sheet
December 31, 2002
(In thousands)

	As Reported	Adjustments	As Restated
Assets			
Current assets:			
Cash and cash equivalents	$ 50,307	$ 6,971	$ 57,278
Marketable securities	60,860	—	60,860
Accounts receivable, net	2,956	1,666	4,622
Inventory, net	10,776	(327)	10,449
Other current assets	3,806	(290)	3,516
Total current assets	128,705	8,020	136,725
Property and equipment, net	11,174	372	11,546
Purchased intangible assets, net	1,174	3,636	4,810
Other assets	480	(44)	436
	$ 141,533	$ 11,984	$ 153,517
Liabilities and Stockholders' Equity			
Current liabilities:			
Accounts payable	$ 4,142	$ (517)	$ 3,625
Accrued expenses	33,379	(16,890)	16,489
Accrued restructuring expenses	3,143	(812)	2,331
Current portion of deferred revenue	29,235	22,493	51,728
Current portion of long term liabilities	1,606	—	1,606
Total current liabilities	71,505	4,274	75,779
Long−term deferred revenue, less current portion	—	8,024	8,024
Long−term liabilities, less current portion	3,293	—p	3,293
Convertible subordinated note	10,000	—	10,000
Commitments and contingencies			
Stockholders' equity:			
Preferred stock	—	—	—
Common stock	207	—	207
Capital in excess of par value	858,126	(4,566)	853,560
Accumulated deficit	(797,868)	4,442	(793,426)
Deferred compensation	(3,469)	(190)	(3,659)
Treasury stock, at cost	(261)	—	(261)
Total stockholders' equity	56,735	(314)	56,421
	$ 141,533	$ 11,984	$ 153,517

(18) Quarterly Results of Operations (unaudited)

The following table presents Sonus' quarterly operating results for the years ended December 31, 2003 and 2002. The information for each of these quarters is unaudited and has been prepared on the same basis as the audited consolidated financial statements. In the opinion of management, all necessary adjustments, consisting only of normal recurring adjustments, have been included to present fairly the unaudited consolidated quarterly results when read in conjunction with our audited consolidated financial statements and related notes. The quarterly net income in the second quarter of 2002 and fourth quarter of 2003 was primarily the result of recognizing previously deferred revenue of $27,500,000 and $10,900,000, respectively, from arrangements with a single customer. The previously deferred revenue was recognized as revenue upon the delivery of certain specified software releases in the second quarter of 2002 and fourth quarter of 2003. See Note 2 to Sonus' consolidated financial statements. These operating results are not necessarily indicative of the results of any future period.

	Three months ended							
	Dec. 31, 2003	Sept 30, 2003	June 30, 2003	Mar. 31, 2003	Dec. 31, 2002	Sept. 30, 2002	June 30, 2002	Mar. 31, 2002
		As Restated	As Restated	As Restated	As Restated	As Restated	As Restated	As Restated
	(in thousands, except per share data) (unaudited)							
Consolidated Statement of Operations Data:								
Revenues	$ 46,384	$ 22,251	$ 15,366	$ 9,209	$ 12,476	$ 9,158	$ 51,775	$ 20,508
Cost of revenues	17,295	9,256	7,265	4,093	7,209	7,919	19,660	16,788
Gross profit	29,089	12,995	8,101	5,116	5,267	1,239	32,115	3,720
Operating expenses:								
Research and development	7,945	8,036	8,504	7,705	9,277	9,218	11,165	14,931
Sales and marketing	6,990	7,732	4,476	3,971	6,444	4,466	9,417	7,459
General and administrative	6,338	842	1,456	1,839	(1,463)	2,932	1,192	2,587
Stock based compensation	802	1,047	645	924	2,926	2,228	4,918	6,799
Amortization of goodwill and purchased intangible assets	602	602	602	602	676	1,173	1,190	1,190
Write off of goodwill and purchased intangible assets	—	—	—	—	—	10,950	—	—
Restructuring charges	—	—	—	—	967	1,007	1,013	4,752
Total operating expenses	22,677	18,259	15,683	15,041	18,827	31,974	28,895	37,718
Income (loss) from operations	6,412	(5,264)	(7,582)	(9,925)	(13,560)	(30,735)	3,220	(33,998)
Interest income, net	693	268	313	251	186	303	376	453
Income (loss) before income taxes	7,105	(4,996)	(7,269)	(9,674)	(13,374)	(30,432)	3,596	(33,545)
Provision for income taxes	204	33	32	33	21	22	21	22
Net income (loss)	$ 6,901	$ (5,029)	$ (7,301)	$ (9,707)	$ (13,395)	$ (30,454)	$ 3,575	$ (33,567)
Net income (loss) per share:								
Basic	$ 0.03	$ (0.02)	$ (0.03)	$ (0.05)	$ (0.07)	$ (0.16)	$ 0.02	$ (0.18)
Diluted	$ 0.03	$ (0.02)	$ (0.03)	$ (0.05)	$ (0.07)	$ (0.16)	$ 0.02	$ (0.18)
Shares used in computing net income (loss) per share (Note 1 (q)):								
Basic	242,983	224,356	215,970	198,703	196,107	193,155	190,540	187,173
Diluted	258,607	224,356	215,970	198,703	196,107	193,155	200,509	187,173

The accompanying consolidated financial data set forth below presents our consolidated statement of operations for the first three quarters of 2003 and for each of the quarters in 2002, showing the amounts previously reported, adjustments and as restated.

	Three months ended								
	March 31, 2003			June 30, 2003			September 30, 2003		
	As Reported	Adjustments	As Restated	As Reported	Adjustments	As Restated	As Reported	Adjustments	As Restated
	(in thousands, except per share data) (unaudited)								
Revenues	$ 16,019	$ (6,810)	$ 9,209	$ 21,356	$ (5,990)	$ 15,366	$ 28,644	$ (6,393)	$ 22,251
Cost of revenues	5,430	(1,337)	4,093	8,793	(1,528)	7,265	11,047	(1,791)	9,256
Gross profit	10,589	(5,473)	5,116	12,563	(4,462)	8,101	17,597	(4,602)	12,995
Operating expenses:									
Research and development	7,702	3	7,705	8,245	259	8,504	7,984	52	8,036
Sales and marketing	5,274	(1,303)	3,971	5,643	(1,167)	4,476	6,536	1,196	7,732
General and administrative	1,080	759	1,839	1,188	268	1,456	999	(157)	842
Stock−based compensation	894	30	924	739	(94)	645	866	181	1,047
Amortization of goodwill and purchased intangible assets	271	331	602	271	331	602	271	331	602
Total operating expenses	15,221	(180)	15,041	16,086	(403)	15,683	16,656	1,603	18,259
Income (loss) from operations	(4,632)	(5,293)	(9,925)	(3,523)	(4,059)	(7,582)	941	(6,205)	(5,264)
Interest income (expense), net	251	—	251	313	—	313	268	—	268
Income (loss) before income taxes	(4,381)	(5,293)	(9,674)	(3,210)	(4,059)	(7,269)	1,209	(6,205)	(4,996)
Provision for income taxes	—	33	33	—	32	32	—	33	33
Net income (loss)	$ (4,381)	$ (5,326)	$ (9,707)	$ (3,210)	$ (4,091)	$ (7,301)	$ 1,209	$ (6,238)	$ (5,029)
Basic net income (loss) per share	$ (0.02)	$ (0.03)	$ (0.05)	$ (0.01)	$ (0.02)	$ (0.03)	$ 0.01	$ (0.03)	$ (0.02)
Diluted net income (loss) per share	$ (0.02)	$ (0.03)	$ (0.05)	$ (0.01)	$ (0.02)	$ (0.03)	$ 0.01	$ (0.03)	$ (0.02)
Shares used in computing basic net income (loss) per share	198,703		198,703	215,970		215,970	224,356		224,356
Shares used in computing diluted net loss per share	198,703		198,703	215,970		215,970	239,446	(15,090)	224,356

	Three Months ended March 31, 2002			Three Months ended June 30, 2002		
	As Reported	Adjustments	As Restated	As Reported	Adjustments	As Restated
	(in thousands, except per share data)					
	(unaudited)					
Revenues	$ 21,158	$ (650)	$ 20,508	$ 21,295	$ 30,480	$ 51,775
Cost of revenues	19,309	(2,521)	16,788	9,948	9,712	19,660
Gross profit	1,849	1,871	3,720	11,347	20,768	32,115
Operating expenses:						
Research and development	14,615	316	14,931	12,225	(1,060)	11,165
Sales and marketing	8,407	(948)	7,459	8,280	1,137	9,417
General and administrative	1,466	1,121	2,587	1,691	(499)	1,192
Stock−based compensation	5,743	1,056	6,799	5,949	(1,031)	4,918
Amortization of goodwill and purchased intangible assets	406	784	1,190	383	807	1,190
Restructuring charges (benefit), net	(12,141)	16,893	4,752	1,013	—	1,013
Total operating expenses	18,496	19,222	37,718	29,541	(646)	28,895
Income (loss) from operations	(16,647)	(17,351)	(33,998)	(18,194)	21,414	3,220
Interest income (expense), net	453	—	453	376	—	376
Income (loss) before income taxes	(16,194)	(17,351)	(33,545)	(17,818)	21,414	3,596
Provision for income taxes	—	22	22	—	21	21
Net income (loss)	$ (16,194)	$ (17,373)	$ (33,567)	$ (17,818)	$ 21,393	$ 3,575
Basic net income (loss) per share	$ (0.09)	$ (0.09)	$ (0.18)	$ (0.09)	$ 0.11	$ 0.02
Diluted net income (loss) per share	$ (0.09)	$ (0.09)	$ (0.18)	$ (0.09)	$ 0.11	$ 0.02
Shares used in computing basic net income (loss) per share	186,057	1,116	187,173	189,183	1,357	190,540
Shares used in computing diluted net income (loss) per share	186,057	1,116	187,173	189,183	11,326	200,509

	Three Months ended September 30, 2002			Three Months ended December 31, 2002		
	As Reported	Adjustments	As Restated	As Reported	Adjustments	As Restated
	(in thousands, except per share data)					
	(unaudited)					
Revenues	$ 7,445	$ 1,713	$ 9,158	$ 12,660	$ (184)	$ 12,476
Cost of revenues	4,747	3,172	7,919	6,298	911	7,209
Gross profit	2,698	(1,459)	1,239	6,362	(1,095)	5,267
Operating expenses:						
Research and development	9,685	(467)	9,218	8,783	494	9,277
Sales and marketing	5,520	(1,054)	4,466	5,656	788	6,444
General and administrative	2,446	486	2,932	538	(2,001)	(1,463)
Stock−based compensation	3,962	(1,734)	2,228	3,841	(915)	2,926
Amortization of goodwill and purchased intangible assets	366	807	1,173	359	317	676
Write−off of goodwill and purchased intangible assets	1,673	9,277	10,950	175	(175)	—
Restructuring charges, net	987	20	1,007	16	951	967
Total operating expenses	24,639	7,335	31,974	19,368	(541)	18,827
Loss from operations	(21,941)	(8,794)	(30,735)	(13,006)	(554)	(13,560)
Interest income, net	303	—	303	186	—	186
Loss before income taxes	(21,638)	(8,794)	(30,432)	(12,820)	(554)	(13,374)
Provision for income taxes	—	22	22	—	21	21
Net loss	$ (21,638)	$ (8,816)	$ (30,454)	$ (12,820)	$ (575)	$ (13,395)

Basic and diluted net loss per share	$ (0.11)	$ (0.05)	$ (0.16)	$ (0.07)	$ —	$ (0.07)
Shares used in computing net loss per share	191,823	1,332	193,155	195,648	459	196,107

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EXHIBIT INDEX

Exhibit No.	Description
3.1#	Fourth Amended and Restated Certificate of Incorporation of Sonus Networks, Inc., as amended.
3.2(b)	Amended and Restated By Laws of Sonus Networks, Inc.
4.1(b)	Form of Stock Certificate representing shares of Sonus Networks, Inc. Common Stock.
10.1(a)	Registration Rights Agreement, dated as of November 2, 2000, by and among Sonus Networks, Inc. and the Stockholder parties thereto.
10.2(a)+	Sonus 2000 Retention Plan.
10.3(a)+	Telecom technologies, inc. 1998 Amended Equity Incentive Plan.
10.4(b)+	Amended and Restated 1997 Stock Incentive Plan of the Registrant.
10.5(b)+	2000 Employee Stock Purchase Plan of the Registrant.
10.6(b)	Lease, dated January 21, 1999, as amended, between the Registrant and Glenborough Fund V, Limited Partnership with respect to property located at 5 Carlisle Road, Westford, Massachusetts.
10.7(a)	Sub lease, dated October 20, 2000, between the Registrant and Unisphere Networks, Inc. with respect to property located at 5 Carlisle Road, Westford, Massachusetts.
10.8(a)	Sub Lease, dated October 20, 2000, between the Registrant and Unisphere Networks, Inc. with respect to property located at 235 Littleton Road, Westford, Massachusetts.
10.9(a)	Lease, dated September 30, 2000, between the Registrant and BCIA New England Holdings LLC with respect to property located at 25 Porter Road, Littleton, Massachusetts.
10.10(b)	Agreement of Sublease, dated April 14, 2000, between the Registrant and Unisphere Solutions, Inc. with respect to property located at 25 Porter Road, Littleton, Massachusetts.
10.11(a)	Office Lease Agreement, dated as of November 14, 2000, between telecom technologies, inc. and TR Lookout Partners, Ltd. with respect to property located at 1301 East Lookout Drive, Suite 3000, Richardson, Texas.
10.12(a)	First Amendment to Office Lease Agreement, dated as of January 8, 2001, between telecom technologies, inc. and TR Lookout Partners, Ltd. with respect to property located at 1300 East Lookout Drive, Suite 3000, Richardson, Texas.
10.13(c)	Office Lease Agreement dated April 4, 1997, between telecom technologies, inc. and Collins Campbell Joint Venture with respect to property located at 1701 North Collins Blvd., Suite 3000, Richardson, Texas.
10.14(c)	First Amendment to Office Lease Agreement, dated November 1, 1997, between telecom technologies, inc. and Collins Campbell Joint Venture with respect to property located at 1701 North Collins Blvd., Suite 3000, Richardson, Texas.
10.15(c)	Second Amendment to Office Lease Agreement, dated July 1, 1998, between telecom technologies, inc. and Collins Campbell Joint Venture with respect to property located at 1701 North Collins Blvd., Suite 3000, Richardson, Texas.
10.16(c)	Third Amendment to Office Lease Agreement, dated July 1, 1998, between telecom technologies, inc. and Collins Campbell Joint Venture with respect to property located at 1701 North Collins Blvd., Suite 3000, Richardson, Texas.
10.17(c)	Fourth Amendment to Office Lease Agreement, dated February 1, 1999, between telecom technologies, inc. and Collins Campbell Joint Venture with respect to property located at 1701 North Collins Blvd., Suite 3000, Richardson, Texas.

10.18(c)	Global Agreement, dated March 5, 2002, by and between TR Lookout Partners, Ltd., Collins Campbell Joint Venture, telecom technologies, inc. and Registrant related to property lease agreements.
10.19(e)	Fifth Amendment to Office Lease Agreement, dated February 28, 2002, between telecom technologies, inc. and Collins Campbell Joint Venture with respect to property located at 1701 North Collins Blvd., Suite 3000, Richardson, Texas.
10.20(e)	Sixth Amendment to Office Lease Agreement, dated February 1, 2003, between telecom technologies, inc. and Collins Campbell Joint Venture with respect to property located at 1701 North Collins Blvd., Suite 3000, Richardson, Texas.
10.21#	Sublease Agreement, dated October 16, 2003, by and between Cisco Systems, Inc. and Sonus Networks, Inc. with respect to property located at 250 Apollo Drive, Chelmsford, Massachusetts.
10.22(c)	Loan and Security Agreement, dated as of January 16, 2002, by and between the Registrant and Silicon Valley Bank.
10.23(f)	Amendment to Loan and Security Agreement, dated as of March 14, 2003, by and between the Registrant and Silicon Valley Bank.
10.24(d)	Offer to Exchange Outstanding Stock Options dated October 16, 2002, as amended.
10.25*+	Employment letter, dated April 6, 2004, by and between the Registrant and Albert A. Notini.
14.1#	Code of Business Conduct and Ethics.
21.1#	Subsidiaries of the Registrant.
23.1*	Consent of Ernst & Young LLP.
31.1**	Certificate of Sonus Networks, Inc. Chief Executive Officer pursuant to Section 302 of the Sarbanes−Oxley Act of 2002.
31.2**	Certificate of Sonus Networks, Inc. Chief Operating Officer pursuant to Section 302 of the Sarbanes−Oxley Act of 2002.
31.3*	Certificate of Sonus Networks, Inc. Chief Accounting Officer pursuant to Section 302 of the Sarbanes−Oxley Act of 2002.
32.1*	Certificate of Sonus Networks, Inc. Chief Executive Officer pursuant to Section 906 of the Sarbanes−Oxley Act of 2002.
32.2*	Certificate of Sonus Networks, Inc. Chief Operating Officer pursuant to Section 906 of the Sarbanes−Oxley Act of 2002.
32.3*	Certificate of Sonus Networks, Inc. Chief Accounting Officer pursuant to Section 906 of the Sarbanes−Oxley Act of 2002.

(a)
Incorporated by reference to the Registrant's Registration Statement on Form S−4 (file No. 333−52682).

(b)
Incorporated by reference to the Registrant's Registration Statement on Form S−1 (file No. 333−32206).

(c)
Incorporated by reference from the Registrant's Form 10−K (file No. 000−30229), filed March 28, 2002 with the SEC.

(d)
Attached as Exhibit (a)(1) to Tender Offer Statement on Schedule TO (file No. 005−60815), filed October 16, 2002 with the SEC, and subsequently amended by Amendment No. 1, filed on October 17, 2002, Amendment No. 2, filed on November 12, 2002, and Amendment No. 3, filed on November 26, 2002.

(e)
Incorporated by reference from the Registrant's Form 10−K (file No. 000−30229), filed March 19, 2003 with the SEC.

Exhibit D

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Filed pursuant to Rule 424(b)(5)
Registration No. 333−61940

Prospectus Supplement to Prospectus dated June 25, 2001.

17,000,000 Shares

Sonus Networks, Inc.

Common Stock

The common stock is quoted on the Nasdaq National Market under the symbol "SONS". The last reported sale price of the common stock on September 23, 2003 was $8.35 per share.

See "Risk Factors" beginning on page 5 of the accompanying prospectus to read about factors you should consider before buying shares of the common stock.

Neither the Securities And Exchange Commission nor any other regulatory body has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus supplement or the accompanying prospectus. Any representation to the contrary is a criminal offense.

	Per Share	Total
Initial price to public	$ 7.75	$ 131,750,000
Underwriting discount (1)	$ 0.33	$ 5,610,000
Proceeds, before expenses, to Sonus	$ 7.42	$ 126,140,000

(1) In addition, Goldman, Sachs & Co. may receive from purchasers of the shares normal brokerage commissions in amounts agreed with such purchasers.

Goldman, Sachs & Co. expects to deliver the shares against payment in New York, New York on September 26, 2003.

Goldman, Sachs & Co.

Prospectus Supplement dated September 23, 2003.

PROSPECTUS SUPPLEMENT SUMMARY

We have entered into an underwriting agreement with Goldman, Sachs & Co. relating to shares of our common stock, par value $0.001 per share, offered by this prospectus supplement and the accompanying prospectus. In accordance with the terms of the underwriting agreement, Goldman, Sachs & Co. has agreed to purchase all of the 17,000,000 shares.

USE OF PROCEEDS

We intend to use the net proceeds from the sales of securities to provide additional funds for our operations and for other general corporate purposes which may include, among other things:

•

the repayment of indebtedness;

- working capital;
- capital expenditures; and
- acquisitions of, or investments in, complementary technologies or businesses.

The precise amount and timing of the application of proceeds will depend upon our funding requirements in the future.

UNDERWRITING

We have entered into an underwriting agreement with Goldman, Sachs & Co. with respect to the shares being offered. Subject to certain conditions, Goldman, Sachs & Co. has agreed to purchase all of the 17,000,000 shares offered hereby.

Shares sold by Goldman, Sachs & Co. to the public will initially be offered at the initial public offering price set forth on the cover of this prospectus supplement. In addition, Goldman, Sachs & Co. may receive from purchasers of the shares normal brokerage commissions in amounts agreed with such purchasers. If all the shares are not sold at the initial price to public, Goldman, Sachs & Co. may change the offering price and the other selling terms.

We and our officers and directors have agreed with Goldman, Sachs & Co. not to dispose of or hedge any of our common stock or securities convertible into or exchangeable for shares of common stock during the period from the date of this prospectus supplement continuing through the date 60 days after the date of this prospectus supplement, with certain limited exceptions as expressly agreed to by Goldman, Sachs & Co. This agreement does not apply to any existing employee benefit plans.

In connection with the offering, Goldman, Sachs & Co. may purchase and sell shares of common stock in the open market. These transactions may include short sales, stabilizing transactions and purchases to cover positions created by short sales. Short sales involve the sale by Goldman, Sachs & Co. of a greater number of shares than it is required to purchase in the offering. Goldman, Sachs & Co. will need to close out any short sale by purchasing shares in the open market. Goldman, Sachs & Co. is likely to create a short position if it is concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in the offering. Stabilizing transactions consist of various bids for or purchases of common stock made by Goldman, Sachs & Co. in the open market prior to the completion of the offering.

Purchases to cover a short position and stabilizing transactions may have the effect of preventing or retarding a decline in the market price of our stock, and may stabilize, maintain or otherwise affect the market price of our common stock. As a result, the price of the common stock may be higher than the price that otherwise might exist in the open market. If these activities are commenced, they may be discontinued at any time. These transactions may be effected on NASDAQ NMS, in the over−the−counter market or otherwise.

We estimate that our share of the total expenses of the offering, excluding underwriting discounts and commissions, will be approximately $200,000.

We have agreed to indemnify Goldman, Sachs & Co. against certain liabilities, including liabilities under the Securities Act of 1933.

Goldman, Sachs & Co. and its affiliates have, from time to time, performed, and may in the future perform, various financial advisory and investment banking services for us, for which they received or will receive customary fees and expenses.

LEGAL MATTERS

Bingham McCutchen LLP, our outside counsel, will pass upon the legality of the shares of our common stock offered hereby for us. As of September 19, 2003, attorneys at Bingham McCutchen LLP owned, in the aggregate, 30,400 shares of our common stock. Ropes & Gray, counsel to Goldman, Sachs & Co., will pass upon the legality of the shares of our common stock offered hereby for Goldman, Sachs & Co.

PROSPECTUS

$1,000,000,000

Sonus NETWORKS

Debt Securities

Warrants

Common Stock

We will provide the specific terms for each of these securities and their offering prices in supplements to this prospectus. In the case of debt securities, these terms will include, as applicable, the specific designation, aggregate principal amount, maturity, rate or formula of interest, premium and terms for redemption. In the case of warrants to purchase debt securities or shares of common stock, the terms will include term, conversion and exercise prices and other terms. In the case of common stock, these terms will include the aggregate number of shares offered.

We may sell any combination of these securities in one or more offerings up to a total dollar amount of $1,000,000,000. We may sell these securities to or through underwriters and also to other purchasers or through agents. We will set forth the names of any underwriters or agents in the accompanying prospectus supplement.

Our common stock is listed on the Nasdaq National Market under the symbol "SONS". None of the other securities are currently publicly traded.

You should read carefully this prospectus, the documents incorporated by reference in the prospectus and any prospectus supplement before you invest. We strongly recommend that you read carefully the risks we describe in the accompanying prospectus supplement, as well as the risk factors in our most current reports to the Securities and Exchange Commission, for a fuller understanding of the risks and uncertainties that we face.

See "Risk Factors" on page 5 to read about factors you should consider before buying these securities.

Neither the Securities and Exchange Commission nor any other regulatory body has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

This prospectus may not be used to consummate sales of securities unless it is accompanied by a prospectus supplement.

Goldman, Sachs & Co.

Prospectus dated June 25, 2001.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, using a "shelf" registration process. Under this shelf process we may offer, from time to time, in one or more offerings:

- our debt securities;
- warrants to purchase our common stock or debt securities; or
- shares of our common stock.

The total aggregate offering price of these securities will not exceed $1,000,000,000. This prospectus provides you with a general description of the securities we may offer. Each time we offer securities, we will provide you with a prospectus supplement that will describe the specific amounts, prices and terms of the securities we offer. The prospectus supplement also may add, update or change information contained in this prospectus.

We may sell the securities to or through underwriters, dealers or agents or directly to purchasers. We and our agents reserve the sole right to accept and to reject in whole or in part any proposed purchase of securities. A prospectus supplement, which we will provide to you each time we offer securities, will provide the names of any underwriters, dealers or agents involved in the sale of the securities, and any applicable fee, commission or discount arrangements with them.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC under the Securities Act of 1933 a registration statement on Form S−3. This prospectus does not contain all of the information contained in the registration statement since portions have been omitted under the rules of the SEC. We also file annual, quarterly and special reports, proxy statements and other information with the SEC under the Exchange Act. The Exchange Act file number for our SEC filings is 000−30229. You may read and copy the registration statement and any other document we file at the following SEC public reference rooms:

Judiciary Plaza 450 Fifth Street, N.W. Rm. 1024 Washington, D.C. 20549	500 West Madison Street 14th Floor Chicago, Illinois 60661	7 World Trade Center Suite 1300 New York, New York 10048

You may obtain information on the operation of the public reference room in Washington, D.C. by calling the SEC at 1−800−SEC−0330. We file information electronically with the SEC. Our SEC filings are available from the SEC's Internet site at *http://www.sec.gov*, which contains reports, proxy and information statements and other information regarding issuers that file electronically. You may read and copy our SEC filings and other information at the offices of Nasdaq Operations, 1735 K Street, N.W., Washington, D.C. 20006.

INCORPORATION BY REFERENCE

The SEC allows us to "incorporate by reference" the documents we file with it, which means that we can disclose important information to you by referring you to those documents instead of reproducing that information in this prospectus. The information incorporated by reference is considered to be part of this prospectus, and information in documents that we file later with the SEC will automatically update and supersede information in this prospectus. We incorporate by reference the following documents:

- Our Annual Report on Form 10−K for the fiscal year ended December 31, 2000 filed on March 28, 2001;
- Our Quarterly Report on Form 10−Q for the quarter ended March 31, 2001 filed on May 15, 2001;
- Our Current Report on Form 8−K filed on June 21, 2001; and
- The description of common stock contained in our registration statement on Form 8−A filed on April 5, 2000, as amended.

In addition to the documents listed above, we also incorporate by reference any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, including any filings after the date of initial filing and prior to the effectiveness of the registration statement of which this propectus is a part, until we have sold all of the offered securities to which this prospectus relates or the offering is otherwise terminated.

We will provide a copy of the documents we incorporate by reference, at no cost, to any person who receives this prospectus. To request a copy of any or all of these documents, you should write or telephone us at: 5 Carlisle Road, Westford, Massachusetts 01886, Attention: Investor Relations; telephone (978) 692−8999.

SUMMARY

This summary highlights the more detailed information contained elsewhere in this prospectus. It may not include all the information that is important to you. You should read the entire prospectus, the prospectus supplement delivered with the prospectus, and the documents incorporated by reference before making an investment decision.

ABOUT SONUS NETWORKS

We are a leading provider of voice infrastructure products for the new public network. Our products are a new generation of carrier−class switching equipment and software that enable voice services to be delivered over packet−based networks. Designed for deployment at the core of a service provider's network, our products significantly reduce the cost to build and operate voice services compared to traditional alternatives. Moreover, our products offer a powerful and open platform for service providers to increase their revenues through the creation and delivery of new and innovative voice and data services. Our customers include world−leading service providers. Our objective is to capitalize on our early technology and market lead and build the premier franchise in voice infrastructure solutions for the new public network.

We were incorporated as a Delaware corporation in August 1997. Our principal executive offices are located at 5 Carlisle Road, Westford, Massachusetts 01886, and our telephone number is (978) 692−8999.

SUMMARY OF THE SECURITIES WE ARE OFFERING

We may offer any of the following securities from time to time:

- debt securities;
- warrants to purchase debt securities or common stock; or
- common stock.

When we use the term "securities" in this prospectus, we mean any of the securities we may offer with this prospectus, unless we say otherwise. The total aggregate dollar amount of all securities that we may issue will not exceed $1,000,000,000. If we issue debt securities at a discount from their original stated principal amount, then, for purposes of calculating the total dollar amount of all securities issued under this prospectus, we will treat the initial offering price of the debt securities as the total original principal amount of the debt securities. This prospectus, including the following summary, describes the general terms that may apply to the securities. The specific terms of any particular securities that we may offer will be described in a separate supplement to this prospectus.

Debt Securities

Our debt securities may be senior or subordinated in right of payment. For any particular debt securities we offer, the applicable prospectus supplement will describe the specific designation, the aggregate principal or face amount and the purchase price; the ranking, whether senior or subordinated; the stated maturity; the redemption terms, if any; the conversion terms, if any; the rate or manner of calculating the rate and the payment dates for interest, if any; the amount or manner of calculating the amount payable at maturity and whether that amount may be paid by delivering cash, securities or other property; and any other specific terms. We will issue the senior and subordinated debt securities under separate indentures between us and a trustee that we will identify in the applicable prospectus supplement.

Warrants

We may offer warrants to purchase our debt securities or common stock. For any particular warrants we offer, the applicable prospectus supplement will describe the underlying security; the expiration date; the exercise price or the manner of determining the exercise price; the amount and kind, or the manner of determining the amount and kind, of security to be delivered by us upon exercise; and any other specific terms. We may issue the warrants under warrant agreements between us and one or more warrant agents.

Common Stock

We may offer shares of our common stock. Our common stock currently is traded on the Nasdaq National Market under the symbol "SONS".

Listing

If any securities are to be listed or quoted on a securities exchange or quotation system, the applicable prospectus supplement will say so.

RISK FACTORS

Investing in our securities involves a high degree of risk. Before making an investment decision, you should carefully consider the risk factors set forth in the accompanying prospectus supplement, our Quarterly Report on Form 10−Q for the quarter ended March 31, 2001, filed on May 15, 2001, as well as other information we include or incorporate by reference in this prospectus and the additional information in the other reports we file with the SEC. The risks and uncertainties we have described are not the only ones facing our company. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect us.

SPECIAL NOTE REGARDING FORWARD−LOOKING STATEMENTS

Some of the statements contained in this prospectus, any prospectus supplement and the documents we incorporate by reference constitute forward−looking statements that involve substantial risks and uncertainties. In some cases, you can identify these statements by forward−looking words such as "may," "will," "should," "expect," "plan," "anticipate," "believe," "estimate," or "continue" and variations of these words or comparable words. In addition, any statements which refer to expectations, projections or other characterizations of future events or circumstances are forward−looking statements. These forward−looking statements involve known and unknown risks, uncertainties and situations that may cause our industry's actual results, level of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by these statements. The risk factors set forth in any prospectus supplement and in the reports we file with the SEC that are incorporated by reference in this prospectus provide examples of risks, uncertainties and events that may cause our actual results to differ from the expectations described or implied in our forward−looking statements.

Although we believe that the expectations reflected in the forward−looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. You should not place undue reliance on these forward−looking statements, which apply only as of the date of this prospectus. Except as required by law, we do not undertake to update or revise any forward−looking statement, whether as a result of new information, future events or otherwise.

USE OF PROCEEDS

Unless we specify otherwise in a prospectus supplement, we intend to use the net proceeds from the sales of securities to provide additional funds for our operations and for other general corporate purposes which may include, among other things:

- the repayment of indebtedness;
- working capital;
- capital expenditures; and
- acquisitions of, or investments in, complementary technologies or businesses.

The precise amount and timing of the application of proceeds will depend upon our funding requirements in the future. We may set forth additional information on the use of net proceeds from the sale of securities we offer under this prospectus in a prospectus supplement relating to the specific offering.

DESCRIPTION OF CAPITAL STOCK

General

Our authorized capital stock consists of 600,000,000 shares of common stock, $0.001 par value per share, and 5,000,000 shares of preferred stock, $0.01 par value per share. As of April 30, 2001, there were approximately 1,000 holders of record of our common stock.

The following description of our common stock, together with the additional information we include in any applicable prospectus supplements, summarizes the material terms and provisions of the common stock that we may offer under this prospectus. For the complete terms of our common stock, please refer to our certificate of incorporation and by−laws that are filed as exhibits to our reports incorporated by reference into the registration statement that includes this prospectus. Delaware's corporation law may also affect the terms of these securities. While the terms we have summarized below will apply generally to any future common stock that we may offer, we will describe the particular terms of any series of these securities in more detail in the applicable prospectus supplement, which may differ from the terms we describe below to the extent indicated in the applicable prospectus supplement.

Common Stock

Holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of the stockholders and do not have cumulative voting rights. Accordingly, holders of a majority of the shares voted can elect all of the directors then standing for election. Holders of common stock are entitled to receive ratably any dividends that may be declared by the board of directors out of legally available funds, subject to any preferential dividend rights of any outstanding preferred stock. Upon our liquidation, dissolution or winding up, the holders of common stock are entitled to receive ratably our net assets available after the payment of all debts and other liabilities and subject to the prior rights of any outstanding preferred stock. Holders of common stock have no preemptive, subscription, redemption or conversion rights. The outstanding shares of common stock are, and the shares offered in connection with this offering will be, when issued and paid for, fully paid and non−assessable. The rights, preferences and privileges of holders of common stock are subject to, and may be adversely affected by, the rights of holders of shares of any series of preferred stock that we may designate and issue in the future without further stockholder approval.

Preferred Stock

Our board of directors is authorized without further stockholder approval to issue from time to time up to an aggregate of 5,000,000 shares of preferred stock in one or more series. The board of directors has discretion to fix or alter the designations, preferences, rights, qualifications, limitations or restrictions of the shares of each series, including the dividend rights, dividend rates, conversion rights, voting rights, term of redemption including sinking fund provisions, redemption price or prices, liquidation preferences and the number of shares constituting any series or designations of any series without further vote or action by our stockholders.

The purpose of authorizing the board of directors to issue preferred stock and determine its rights and preferences is to eliminate delays associated with a stockholder vote on specific issuances. The issuance of preferred stock, while providing desirable flexibility in connection with possible acquisitions and other corporate purposes, could make it more difficult for a third party to acquire, or could discourage a third party from acquiring, a majority of our outstanding voting stock. We have no current plans to issue any shares of preferred stock.

Registration Rights

Pursuant to the terms of an amended and restated Investors' Rights Agreement, some holders of Sonus common stock are entitled to rights with respect to the registration of their shares under the Securities Act. In connection with our acquisition of telecom technologies, inc., or TTI, we have granted additional registration rights to some former TTI stockholders. Set forth below is a summary of the registration rights granted to these groups of stockholders.

Rights Granted under Our Investors' Rights Agreement

Demand Registration Rights. The holders of 35% or more of the shares having registration rights may request that we register shares of common stock. We will be obligated to effect only two registrations pursuant to a demand request by holders of registrable shares.

We are not obligated to effect a registration 90 days prior to the anticipated filing of, or for up to three months from the effective date of, a company−initiated registration. We are also not required to effect a stockholder−requested registration, if the requested registration of shares would adversely affect, to our material harm, any other activity in which we are then engaged. We may only delay stockholder−initiated registrations once every twelve months.

Piggyback Registration Rights. Stockholders with registration rights have unlimited rights to request that shares be included in any company−initiated registration of common stock other than registrations of shares issued in connection with employee benefit plans, shares issued in connection with business combinations subject to Rule 145 under the Securities Act, convertible debt or other specified registrations. If the registration that we initiate involves an underwriting, however, we will not be obligated to register any shares unless the holders agree to the terms of the underwriting agreement. It may also be necessary, at the discretion of the lead underwriter, to limit the number of selling stockholders in the offering, as a result of which stockholders may only be able to register a pro rata number of registrable shares, if any.

Form S−3 Registration Rights. We are eligible, under applicable securities laws, to file registration statements on Form S−3. At this time, one or more stockholders may request that we file a registration statement on Form S−3, so long as the shares offered have an aggregate offering price of at least $1,000,000 based on the public market price at the time of the request. We will be obligated to effect no more than three registrations pursuant to an S−3 request by holders of registration rights.

Future Grants Of Registration Rights. Without the consent of current stockholders owning at least 66 $^{2}/_{3}$% of the then−outstanding registrable shares, we may not grant further registration rights that would be on more favorable terms than the existing registration rights.

Transferability. The registration rights are transferable upon transfer of registrable securities and notice by the holder to us of the transfer, provided that, in most cases, a specified minimum number of shares, as adjusted for splits, dividends, recapitalizations and similar events, are transferred and the transferee or assignee assumes the rights and obligations of the transferor of the shares.

Termination. The registration rights will terminate as to any particular registrable securities on the date on which the shares are sold pursuant to a registration statement and are no longer subject to Rule 144 under the Securities Act. The piggyback registration rights will expire on May 31, 2003, the third anniversary of our initial public offering.

Rights Granted to Other Stockholders

On January 18, 2001, we entered into a registration rights agreement with some of the then−holders of TTI common stock. In this registration rights agreement, we generally agree to use our reasonable best efforts to cause the shares of our common stock held by those former holders of TTI Class A and Class B common stock to be registered for sale under any registration statement that we propose to file from time to time, whether on our behalf or on behalf of our other stockholders.

Delaware Law and Charter and By−Law Provisions; Anti−Takeover Effects

We are subject to the provisions of Section 203 of the General Corporation Law of Delaware. In general, the statute prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. A "business combination" includes mergers, asset sales and other transactions resulting in a financial benefit to the interested stockholder. Subject to some exceptions, an "interested stockholder" is a person who, together with affiliates and associates, owns, or within three years did own, 15% or more of the corporation's voting stock.

Our amended and restated certificate of incorporation and amended and restated by−laws provide:

- that the board of directors be divided into three classes, as nearly equal in size as possible, with staggered three−year terms;
- that directors may be removed only for cause by the affirmative vote of the holders of at least 66 $^{2}/_{3}$% of the shares of our capital stock entitled to vote; and
- that any vacancy on the board of directors, however occurring, including a vacancy resulting from an enlargement of the board, may only be filled by vote of a majority of the directors then in office.

The classification of the board of directors and the limitations on the removal of directors and filling of vacancies could have the effect of making it more difficult for a third party to acquire, or of discouraging a third party from acquiring, Sonus.

Our amended and restated certificate of incorporation and amended and restated by−laws also provide that:

- any action required or permitted to be taken by our stockholders at an annual meeting or special meeting of stockholders may only be taken if it is properly brought before the meeting and may not be taken by written action in lieu of a meeting; and
- special meetings of our stockholders may only be called by the chairman of the board of directors, the president or by our board of directors.

Our amended and restated by−laws provide that, in order for any matter to be considered "properly brought" before a meeting, a stockholder must comply with requirements regarding advance notice to us. These provisions could delay until the next stockholders' meeting stockholder actions that are favored by the holders of a majority of our outstanding voting securities. These provisions may also discourage another person or entity from making a tender offer for our common stock, because the person or entity, even if it acquired a majority of our outstanding voting securities, would be able to take action as a stockholder, such as electing new directors or approving a merger, only at a duly called stockholders meeting, and not by written consent.

Delaware's corporation law provides generally that the affirmative vote of a majority of the shares entitled to vote on any matter is required to amend a corporation's certificate of incorporation or by−laws, unless a corporation's certificate of incorporation or by−laws, as the case may be, requires a greater percentage. Our amended and restated certificate of incorporation requires the affirmative vote of the holders of at least 66 2/3% of the shares of our capital stock entitled to vote to amend or repeal any of the provisions of our amended and restated certificate of incorporation described in the preceding paragraphs. Generally, our amended and restated by−laws may be amended or repealed by a majority vote of the board of directors or the holders of a majority of the shares of our capital stock issued and outstanding and entitled to vote. To amend our amended and restated by−laws regarding special meetings of stockholders, written actions of stockholders in lieu of a meeting and the election, removal and classification of members of the board of directors requires the affirmative vote of the holders of at least 66 2/3% of the shares of our capital stock entitled to vote. The stockholder vote would be in addition to any separate class vote that might in the future be required pursuant to the terms of any series of preferred stock that might be outstanding at the time any of these amendments are submitted to stockholders.

Limitation of Liability and Indemnification

Our amended and restated certificate of incorporation provides that our directors and officers will be indemnified by us to the fullest extent authorized by Delaware law. This indemnification would cover all expenses and liabilities reasonably incurred in connection with their services for or on behalf of us. In addition, our amended and restated certificate of incorporation provides that our directors will not be personally liable for monetary damages to us for breaches of their fiduciary duty as directors, unless they violated their duty of loyalty to us or our stockholders, acted in bad faith, knowingly or intentionally violated the law, authorized illegal dividends or redemptions or derived an improper personal benefit from their action as directors.

Transfer Agent and Registrar

The Transfer Agent and Registrar for our common stock is American Stock Transfer & Trust Company.

Listing

Our common stock is quoted on the Nasdaq National Market under the trading symbol "SONS".

DESCRIPTION OF DEBT SECURITIES

We may offer any combination of senior debt securities or subordinated debt securities. Debt securities are unsecured obligations to repay advanced funds. We may issue any of the senior debt securities and the subordinated debt securities under separate indentures between us, as issuer, and the trustee or trustees identified in a prospectus supplement. The initial forms of these indentures are filed as exhibits to the registration statement of which this prospectus is a part.

The prospectus supplement will describe the particular terms of any debt securities we may offer and these terms may differ from the terms summarized below. The following summaries of the debt securities and certain of the indentures are not complete. We urge you to read the indentures filed as exhibits to the registration statement which includes this prospectus and the description of the debt securities included in the prospectus supplement.

General

We may issue debt securities in one or more series without limit as to aggregate principal amount for the debt securities of any series. Unless the prospectus supplement indicates otherwise, the debt securities will have terms that are consistent with the indentures. Unless the prospectus supplement indicates otherwise, senior debt securities will be unsecured and unsubordinated obligations and will rank equal with all our other unsecured and unsubordinated debt. Subordinated debt securities will be paid only if all payments due under our senior indebtedness, including any outstanding senior debt securities, have been made.

The indentures might not limit the amount of other debt that we may incur or whether that debt is senior to the debt securities offered by this prospectus, and might not contain financial or similar restrictive covenants. The indentures might not contain any provision to protect holders of debt securities against a sudden or dramatic decline in our ability to pay our debt.

The prospectus supplement will describe the debt securities and the price or prices at which we will offer the debt securities. The description will include:

- the title and form of the debt securities;
- any limit on the aggregate principal amount of the debt securities or the series of which they are a part;
- the person to whom any interest on a debt security of the series will be paid;
- the date or dates on which we must repay the principal;
- the rate or rates at which the debt securities will bear interest, if any, the date or dates from which interest will accrue, and the date or dates on which we must pay interest;
- if applicable, the duration and terms of the right to extend interest payment periods;
- the place or places where we must pay the principal and any premium or interest on the debt securities;

- the terms and conditions on which we may redeem any debt security, if at all;
- any obligation to redeem or purchase any debt securities, and the terms and conditions on which we must do so;
- the denominations in which we may issue the debt securities;
- the manner in which we will determine the amount of principal or any premium or interest on the debt securities;

- the currency in which we will pay the principal or any premium or interest on the debt securities;
- the principal amount of the debt securities that we will pay upon declaration of acceleration of their maturity;
- the amount that will be deemed to be the principal amount for any purpose, including the principal amount that will be due and payable upon any maturity or that will be deemed to be outstanding as of any date;
- if applicable, that the debt securities are defeasible and the terms of such defeasance;
- if applicable, the terms of any right to convert debt securities into, or exchange debt securities for, shares of common stock or other securities or property;
- whether we will issue the debt securities in the form of one or more global securities and, if so, the respective depositaries for the global securities and the terms of the global securities;
- the subordination provisions that will apply to any subordinated debt securities;
- any addition to or change in the events of default applicable to the debt securities and any change in the right of the trustee or the holders to declare the principal amount of any of the debt securities due and payable; and
- any addition to or change in the covenants in the indentures.

We may sell the debt securities at a substantial discount below their stated principal amount. We will describe U.S. federal income tax considerations, if any, applicable to debt securities sold at an original issue discount in the prospectus supplement. An "original issue discount security" is any debt security sold for less than its face value, and which provides that the holder cannot receive the full face value if maturity is accelerated. The prospectus supplement relating to any original issue discount securities will describe the particular provisions relating to acceleration of the maturity upon the occurrence of any event of default. In addition, we will describe U.S. federal income tax or other considerations applicable to any debt securities that are denominated in a currency or unit other than U.S. dollars in the prospectus supplement.

Conversion and Exchange Rights

The prospectus supplement will describe, if applicable, the terms on which the debt securities may be converted into or exchanged for common stock or other securities or property. The conversion or exchange may be mandatory or may be at your option. The prospectus supplement will describe how the number of shares of common stock or other securities or property to be received upon conversion or exchange would be calculated.

Subordination of Subordinated Debt Securities

Unless the prospectus supplement indicates otherwise, the following provisions will apply to the subordinated debt securities. The indebtedness underlying the subordinated debt securities will be payable only if all payments due under our senior indebtedness, including any outstanding senior debt securities, have been made. If we distribute our assets to creditors upon any dissolution, winding−up, liquidation or reorganization or in bankruptcy, insolvency, receivership or similar proceedings, we must first pay all amounts due or to become due on all senior indebtedness before we pay the principal of, or any premium or interest on, the subordinated debt securities. In the event the subordinated debt securities are accelerated because of an event of default, we may not make any payment on the subordinated debt securities until we have paid all senior indebtedness or the acceleration is rescinded. If the payment of subordinated debt securities

accelerates because of an event of default, we must promptly notify holders of senior indebtedness of the acceleration.

If we experience a bankruptcy, dissolution or reorganization, holders of senior indebtedness may recover more ratably, and holders of subordinated debt for subordinated debt securities may recover less ratably, than our other creditors. The indenture for subordinated debt securities may not limit our ability to incur additional senior indebtedness.

Form, Exchange and Transfer

We will issue debt securities only in fully registered form, without coupons, and, unless the prospectus supplement indicates otherwise, only in denominations of $1,000 and integral multiples thereof. The holder of a debt security may elect, subject to the terms of the indentures and the limitations applicable to global securities, to exchange them for other debt securities of the same series of any authorized denomination and of similar terms and aggregate principal amount.

Holders of debt securities may present them for exchange as provided above or for registration of transfer, duly endorsed or with the form of transfer duly executed, at the office of the transfer agent we designate for that purpose. We will not impose a service charge for any registration of transfer or exchange of debt securities, but we may require a payment sufficient to cover any tax or other governmental charge payable in connection with the transfer or exchange. We will name the transfer agent in the prospectus supplement. We may designate additional transfer agents or rescind the designation of any transfer agent or approve a change in the office through which any transfer agent acts, but we must maintain a transfer agent in each place of payment on debt securities.

If we redeem the debt securities, we will not be required to issue, register the transfer of or exchange any debt security during a specified period prior to mailing a notice of redemption. We are not required to register the transfer of or exchange any debt securities selected for redemption, except the unredeemed portion of the debt security being redeemed.

Global Securities

The debt securities may be represented, in whole or in part, by one or more global securities that will have an aggregate principal amount equal to that of all debt securities of that series. Each global security will be registered in the name of a depositary identified in the prospectus supplement. We will deposit the global security with the depositary or a custodian, and the global security will bear a legend regarding the restrictions on exchanges and registration of transfer.

Unless the prospectus supplement indicates otherwise, no global security may be exchanged in whole or in part for debt securities registered, and no transfer of a global security in whole in part may be registered, in the name of any person other than the depositary or any nominee or successor of the depositary unless:

- the depositary is unwilling or unable to continue as depositary; or
- the depositary is no longer in good standing under the Securities Exchange Act of 1934 or other applicable statute or regulation.

The depositary will determine how all securities issued in exchange for a global security will be registered.

As long as the depositary or its nominee is the registered holder of a global security, we will consider the depositary or the nominee to be the sole owner and holder of the global security and the underlying debt securities. Except as stated above, owners of beneficial interests in a global security will not be entitled to have the global security or any debt security registered in their

names, will not receive physical delivery of certificated debt securities and will not be considered to be the owners or holders of the global security or underlying debt securities. We will make all payments of principal, premium and interest on a global security to the depositary or its nominee. The laws of some jurisdictions require that some purchasers of securities take physical delivery of securities in definitive form. These laws may prevent you from transferring your beneficial interests in a global security.

Only institutions that have accounts with the depositary or its nominee and persons that hold beneficial interests through the depositary or its nominee may own beneficial interests in a global security. The depositary will credit, on its book−entry registration and transfer system, the respective principal amount of debt securities represented by the global security to the accounts of its participants. Ownership of beneficial interests in a global security will be shown only on, and the transfer of those ownership interests will be effected only through, records maintained by the depositary or any such participant.

The policies and procedures of the depositary may govern payment, transfers, exchanges and other matters relating to beneficial interests in a global security. We and the trustee will assume no responsibility or liability for any aspect of the depositary's or any participant's records relating to, or for payments made on account of, beneficial interests in a global security.

Payment and Paying Agents

Unless the prospectus supplement indicates otherwise, we will pay principal and any premium or interest on a debt security to the person in whose name the debt security is registered at the close of business on the regular record date for the interest.

Unless the prospectus supplement indicates otherwise, we will pay principal and any premium or interest on the debt securities at the office of our designated paying agent. Unless the prospectus supplement indicates otherwise, the corporate trust office of the trustee will be the paying agent for the debt securities.

Any other paying agents we designate for the debt securities of a particular series will be named in the prospectus supplement. We may designate additional paying agents, rescind the designation of any paying agent or approve a change in the office through which any paying agent acts, but we must maintain a paying agent in each place of payment for the debt securities.

The paying agent will return to us all money we pay to it for the payment of the principal, premium or interest on any debt security that remains unclaimed for a specified period. Thereafter, the holder may look only to us for payment, as an unsecured general creditor.

Consolidation, Merger and Sale of Assets

Under the terms of the indentures, so long as any securities remain outstanding, we may not consolidate or enter into a share exchange with or merge into any other person, in a transaction in which we are not the surviving corporation, or sell, convey, transfer or lease our properties and assets substantially as an entirety to any person, unless:

-

the successor assumes our obligations under the debt securities and the indentures; and

- we meet the other conditions described in the indentures.

Events of Default

Each of the following will constitute an event of default under each indenture:

- failure to pay the principal of or any premium on any debt security when due;
- failure to pay any interest on any debt security when due, for more than a specified number of days past the due date;
- failure to deposit any sinking fund payment when due;
- failure to perform any covenant or agreement in the indenture, which failure continued for a specified number of days after written notice has been given by the trustee or the requisite holders of the debt securities of that series;
- specified events of bankruptcy, insolvency or reorganization; and
- any other event of default specified in the prospectus supplement.

If an event of default occurs and continues, both the trustee and holders of a specified percentage in aggregate principal amount of the outstanding securities of that series may declare the principal amount of the debt securities of that series to be immediately due and payable. The holders of a majority in aggregate principal amount of the outstanding securities of that series may, under specified circumstances, rescind and annul the acceleration if all events of default, other than the nonpayment of accelerated principal, have been cured or waived.

Except for specified duties in case of an event of default, the trustee will not be obligated to exercise any of its rights or powers at the request or direction of any of the holders, unless the holders have offered the trustee reasonable indemnity. If they provide this indemnification, the holders of a majority in aggregate principal amount of the outstanding securities of any series may direct the time, method and place of conducting any proceeding for any remedy available to the trustee or exercising any trust or power conferred on the trustee with respect to the debt securities of that series.

Unless the prospectus supplement indicates otherwise, no holder of a debt security of any series may institute any proceeding with respect to the indenture, or for the appointment of a receiver or a trustee, or for any other remedy, unless:

- the holder has previously given the trustee written notice of a continuing event of default;
- the holders of a specified percentage in aggregate principal amount of the outstanding securities of that series have made a written request upon the trustee, and have offered reasonable indemnity to the trustee, to institute the proceeding;
- the trustee has failed to institute the proceeding for a specified period of time after its receipt of the notification; and
- the trustee has not received a direction inconsistent with the request within a specified number of days.

Modification and Waiver

Unless the prospectus supplement indicates otherwise, we and the trustee may change an indenture without the consent of any holders with respect to specific matters, including:

- to fix any ambiguity, defect or inconsistency in the indenture; and
- to change anything that does not materially adversely affect the interests of any holder of debt securities of any series.

In addition, under the indentures, the rights of holders of a series of debt securities may be changed by us and the trustee, either (i) with the written consent of the holders of not less than a majority in aggregate principal amount of the outstanding debt securities of each class that is affected or (ii) by the adoption of a resolution, at a meeting of holders of debt securities at which a quorum is present, by the holders of 66 $^{2}/_{3}$% in aggregate principal amount of the outstanding debt securities of each class that is affected represented at such meeting. We and the trustee, however, may only make the following changes with the consent of the holder of any outstanding debt securities affected:

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extending the fixed maturity of the series of notes;

- reducing the principal amount, reducing the rate of or extending the time of payment of interest, or any premium payable upon the redemption, of any debt securities; or
- reducing the percentage of debt securities the holders of which are required to consent to any amendment.

The holders of a majority in aggregate principal amount of the outstanding debt securities of any series, or holders of 66 $^{2}/_{3}$% in aggregate principal amount of such series, acting at a meeting, may waive any past default under the indenture with respect to debt securities of that series, except a default in the payment of principal, premium or interest on any debt security of that series or in respect of a covenant or provision of the indenture that cannot be amended without each holder's consent.

Except in some limited circumstances, we may set any day as a record date for the purpose of determining the holders of outstanding debt securities of any series entitled to give or take any direction, notice, consent, waiver or other action under the indentures, or be present at a meeting of holders of debt securities. In some limited circumstances, the trustee may set a record date. To be effective, the action must be taken by holders of the requisite principal amount of such debt securities within a specified period following the record date.

Defeasance

To the extent stated in the prospectus supplement, we may elect to apply the provisions in the indentures relating to defeasance and discharge of indebtedness, or to defeasance of some restrictive covenants, to the debt securities of any series. The indentures provide that, upon satisfaction of the requirements described below, we may terminate all of our obligations under the debt securities of any series and the applicable indenture, which is known as legal defeasance, other than our obligation:

- to maintain a registrar and paying agents and hold moneys for payment in trust;
- to register the transfer or exchange or the debt securities; and
- to replace mutilated, destroyed, lost or stolen debt securities.

In addition, we may terminate our obligation to comply with any restrictive covenants under the debt securities of any series or the applicable indenture, which is known as covenant defeasance.

We may exercise our legal defeasance option even if we have previously exercised our covenant defeasance option. If we exercise either defeasance option, payment of the debt securities may not be accelerated because of the occurrence of events of default.

To exercise either defeasance option as to debt securities of any series, we must irrevocably deposit in trust with the trustee money and/or obligations backed by a full faith and credit of the United States that will provide money in an amount sufficient in the written opinion of a national recognized firm of independent public accountants to pay the principal of, premium, if any, and

each installment of interest on the debt securities. We may only establish this trust if, among other things:

- no event of default shall have occurred or be continuing;
- in the case of legal defeasance, we have delivered to the trustee an opinion of counsel to the effect that we have received from, or there has been published by, the Internal Revenue Service a ruling or there has been a change in law, which in the opinion of our counsel, provides that holders of the debt securities will not recognize gain or loss for federal income tax purposes as a result of such deposit, defeasance and discharge and will be subject to federal income tax on the same amount, in the same manner and at the same times as would have been the case if such deposit, defeasance and discharge had not occurred;
- in the case of covenant defeasance, we have delivered to the trustee an opinion of counsel to the effect that the holders of the debt securities will not recognize gain or loss for federal income tax purposes as a result of the deposit, defeasance and discharge and will be subject to federal income tax on the same amount, in the same manner and at the same times as would have been the case if the deposit, defeasance and discharge had not occurred; and
- we satisfy other customary conditions described in the applicable indenture.

Notices

We will mail notices to holders of debt securities as indicated in the prospectus supplement.

Title

We may treat the person in whose name a debt security is registered as the absolute owner, whether or not such debt security may be overdue, for the purpose of making payment and for all other purposes.

Governing Law

The indentures and the debt securities will be governed by and construed in accordance with the laws of the state of New York.

DESCRIPTION OF WARRANTS

General

The following description, together with the additional information we may include in any applicable prospectus supplements, summarizes the material terms and provisions of the warrants that we may offer under this prospectus and the related warrant agreements and warrant certificates. While the terms summarized below will apply generally to any warrants we may offer, we will describe the particular terms of any series of warrants in more detail in the applicable prospectus supplement and these terms may differ from the terms described below.

We may issue, together with other securities or separately, warrants to purchase our debt securities or common stock. We will issue the warrants under warrant agreements to be entered into between us and a bank or trust company, as warrant agent, all as set forth in the applicable prospectus supplement. The warrant agent will act solely as our agent in connection with the warrants of the series being offered and will not assume any obligation or relationship of agency or trust for or with any holders or beneficial owners of warrants.

The applicable prospectus supplement will describe the following terms, where applicable, of warrants in respect of which this prospectus is being delivered:

- the title of the warrants;
- the designation, amount and terms of the securities for which the warrants are exercisable and the procedures and conditions relating to the exercise of such warrants;
- the designation and terms of the other securities, if any, with which the warrants are to be issued and the number of warrants issued with each such security;
- the price or prices at which the warrants will be issued;
- the aggregate number of warrants;
- any provisions for adjustment of the number or amount of securities receivable upon exercise of the warrants or the exercise price of the warrants;
- the price or prices at which the securities purchasable upon exercise of the warrants may be purchased;
- if applicable, the date on and after which the warrants and the securities purchasable upon exercise of the warrants will be separately transferable;
- if applicable, a discussion of the material United States federal income tax considerations applicable to the exercise of the warrants;
- any other terms of the warrants, including terms, procedures and limitations relating to the exchange and exercise of the warrants;
- the date on which the right to exercise the warrants shall commence, and the date on which the right shall expire;
- the maximum or minimum number of warrants which may be exercised at any time; and
- information with respect to book−entry procedures, if any.

Before exercising their warrants, holders of warrants will not have any of the rights of holders of the securities purchasable upon such exercise, including:

- in the case of warrants to purchase debt securities, the right to receive payments of principal of, or premium, if any, or interest on, the debt securities purchasable upon exercise or to enforce covenants in the applicable indenture; or

- in the case of warrants to purchase common stock, the right to receive dividends, if any, or payments upon our liquidation, dissolution or winding up or to exercise voting rights, if any.

Exercise of Warrants

Each warrant will entitle the holder thereof to purchase for cash the amount of debt securities or shares of common stock at the exercise price as will in each case be set forth in, or be determinable as set forth in, the applicable prospectus supplement. Warrants may be exercised at any time up to the close of business on the expiration date set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will become void.

Warrants may be exercised as set forth in the applicable prospectus supplement relating to the warrants offered thereby. Upon receipt of payment and the warrant certificate properly completed and duly executed at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement, we will, as soon as practicable, forward the purchased securities. If less than all of the warrants represented by the warrant certificate are exercised, a new warrant certificate will be issued for the remaining warrants.

Enforceability of Rights of Holders of Warrants

Each warrant agent will act solely as our agent under the applicable warrant agreement and will not assume any obligation or relationship of agency or trust with any holder of any warrant. A single bank or trust company may act as warrant agent for more than one issue of warrants. A warrant agent will have no duty or responsibility in case of any default by us under the applicable warrant agreement or warrant, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a warrant may, without the consent of the related warrant agent or the holder of any other warrant, enforce by appropriate legal action its right to exercise, and receive the securities purchasable upon exercise of, that holder's warrants.

PLAN OF DISTRIBUTION

We may sell the securities being offered hereby in one or more of the following ways from time to time:

- through agents to the public or to investors;
- to underwriters for resale to the public or to investors; or
- directly to investors.

We will set forth in a prospectus supplement the terms of the offering of securities, including:

- the name or names of any agents or underwriters;
- the purchase price of the securities being offered and the proceeds that we will receive from the sale;
- any over−allotment options under which underwriters may purchase additional securities from us;
- any agency fees or underwriting discounts and other items constituting agents' or underwriters' compensation;

- any initial public offering price;
- any discounts or concessions allowed or reallowed or paid to dealers; and
- any securities exchanges on which such securities may be listed.

Agents

We may designate agents who agree to use their reasonable or best efforts to solicit purchases for the period of their appointment or to sell securities on a continuing basis.

Underwriters

If we use underwriters for a sale of securities, the underwriters will acquire the securities for their own account. The underwriters may resell the securities in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. The obligations of the underwriters to purchase the securities will be subject to the conditions set forth in the applicable underwriting agreement. The underwriters will be obligated to purchase all the securities of the series offered if they purchase any of the securities of that series. The underwriters may change from time to time any initial public offering price and any discounts or concessions the underwriters allow or reallow or pay to dealers. We may use underwriters with whom we have a material relationship. We will describe the nature of any such relationship in the prospectus supplement naming the underwriter.

Direct Sales

We may also sell securities directly to one or more purchasers without using underwriters or agents.

Underwriters, dealers and agents that participate in the distribution of the securities may be underwriters as defined in the Securities Act and any discounts or commissions they receive from us and any profit on their resale of the securities may be treated as underwriting discounts and commissions under the Securities Act. We will identify in the applicable prospectus supplement any underwriters, dealers or agents and will describe their compensation. We may have agreements with the underwriters, dealers and agents to indemnify them against specified civil liabilities, including liabilities under the Securities Act. Underwriters, dealers and agents may engage in transactions with or perform services for us or our subsidiaries in the ordinary course of their businesses.

Trading Markets and Listing of Securities

Unless otherwise specified in the applicable prospectus supplement, each class or series of securities will be a new issue with no established trading market, other than our common stock, which is listed on the Nasdaq National Market. We may elect to list any other class or series of securities on any exchange, but we are not obligated to do so. It is possible that one or more underwriters may make a market in a class or series of securities, but the underwriters will not be obligated to do so and may discontinue any market making at any time without notice. We cannot give any assurance as to the liquidity of the trading market for any of the securities.

Stabilization Activities

Any underwriter may engage in over−allotment, stabilizing transactions, short covering transactions and penalty bids in accordance with Regulation M under the Securities Exchange Act of 1934. Over−allotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing

bids do not exceed a specified maximum. Short covering transactions involve purchases of the securities in the open market after the distribution is completed to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a covering transaction to cover short positions. Those activities may cause the price of the securities to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of the activities at any time.

Passive Market Making

Any underwriters who are qualified market makers on the Nasdaq National Market may engage in passive market making transactions in the securities on the Nasdaq National Market in accordance with Rule 103 of Regulation M, during the business day prior to the pricing of the offering, before the commencement of offer or sales of the securities. Passive market makers must comply with applicable volume and price limitations and must be identified as passive market makers. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for such security; if all independent bids are lowered below the passive market maker's bid, however, the passive market maker's bid must then be lowered when certain purchase limits are exceeded.

LEGAL MATTERS

Bingham Dana LLP, Boston, Massachusetts, will provide us with an opinion as to legal matters in connection with the securities we are offering.

EXPERTS

The consolidated financial statements of Sonus Networks, Inc. as of December 31, 1999 and 2000, and for the years ended December 31, 1998, 1999 and 2000, incorporated by reference in this prospectus from Sonus' Annual Report on Form 10−K for the year ended December 31, 2000, have been audited by Arthur Andersen LLP, independent public accountants, as indicated in their report with respect thereto, and are incorporated in reliance upon the authority of said firm as experts in giving said report.

The consolidated financial statements of telecom technologies, inc. as of December 31, 1999 and 2000, and for the years ended December 31, 1998, 1999 and 2000, incorporated by reference in this prospectus from Sonus' Current Report on Form 8−K filed on June 21, 2001, have been audited by Arthur Andersen LLP, independent public accountants, as indicated in their report with respect thereto, and are incorporated in reliance upon the authority of said firm as experts in giving said report.

No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus. You must not rely on any unauthorized information or representations. This prospectus is an offer to sell only the shares offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus is current only as of its date.

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Prospectus Supplement

Prospectus

17,000,000 Shares

Sonus Networks, Inc.

Common Stock

Sonus NETWORKS

Goldman, Sachs & Co.